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DO CONTAGIOUS DISEASES ORIGINATE SPONTANEOUSLY?*

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I SHALL endeavour as concisely as possible to consider the important subject of the origin of Contagious Diseases—one deserving of our careful study. The more we look into this, and into the peculiarities of this class of maladies, the more we shall be struck with wonder. Who can fail to be impressed with the irregularities of the contagium of Rabies, which is transmissible, by inoculation *only*, from the animal in which it originates to so many others so essentially different in conformation and habits, and with the wide differences in its periods of latency? In the human being, where the full history of Rabies can be ascertained with some considerable certainty, the symptoms have become apparent in periods varying from three days to over five and a half years after the party has been bitten. It is very true that the incubative stage generally lasts about six weeks or so, but this period is not constant, nor indeed is the contagium certain in its effects, for many persons bitten by rabid dogs escape altogether.

* Read at the Annual Meeting of the Yorkshire Veterinary Medical Society.

If we compare these peculiarities of the Rabies virus with those of Cattle Plague, we shall be struck by the contrast: the one contagium so wide in its effects and so uncertain in its latency; the other confined to one natural order, and so essentially rapid in its effects—its period of latency not exceeding ten days; or with Pleuro-pneumonia—so peculiarly a bovine disease, so eminently contagious, but which may not be propagated by inoculation, and in which the period of latency sometimes covers several months. Glanders—an equine disease, but transmissible by inoculation to man—has its own peculiarities: here again the incubative period is very uncertain; but if we turn to the Foot-and-mouth Disease we shall see the effects of an agency as subtle and more swift than the poison of Cattle Plague, the symptoms of the malady induced by it being apparent in two or three days after contact. Although this disease is so rapidly infectious, it appears that the experiments of Dr. Burdon-Sanderson to propagate it by inoculation have as yet shown but negative results. I need not dwell longer upon this point, but I wish you particularly to note these eccentricities of disease-producing agents, as I shall presently refer to the properties of the infecting material of the disease which I shall bring before you in support of the affirmative of the question of my paper.

It is not my intention to discuss any facts connected with the origin of Glanders, Rabies, Pig-Typhoid, Canine Distemper, etc.—diseases which are believed by the majority of veterinary surgeons in this country to originate spontaneously. The certainty that these diseases do so originate may be sufficient to convince my mind; but there are others, and amongst them some of the greatest pathologists of the world, who refuse to believe in spontaneity of the origin of disease, and who in reply say, "Well, it may be apparent enough to you that there has been no infection or contagion, but how are you to prove it? May there not be some contact with a virus that you know nothing of? How do you account for the origin of outbreaks of such diseases as Pleuro-pneumonia or Foot-and-mouth Disease, when apparently there has been no source of contact? or do you mean to say that these diseases originate spontaneously in this country?"

Again, many pathologists maintain that the *materies morbi*,

the *virus*, or *contagium* of contagious diseases, consists of germs which are introduced into the organism, and that the original germ gives rise to successive generations of germs, and that a germ is but a particle of living matter which has been detached from already living matter, and this living matter came from matter of some sort which already lived before it; and upon this point the editor of the *Veterinarian* (March, 1873) says: "But the pathologist may be content to know that all positive evidence is in favour of the conclusion that contagious diseases do not arise naturally in this country. There are always centres of infection, and from them diseases will spread with a rapidity proportionate to the favourable or adverse character of the surrounding circumstances; but the circumstances do not, according to observation, produce the disease when the infecting germs are absent."

It is now my intention to endeavour to prove to you that a contagious disease—the only disease, in fact, in which infecting germs or organisms have been demonstrated to play a most important part—does originate spontaneously in this country, that it originates in no other way, and that it is transmitted from diseased animals to others of the same and of different species, not by cohabitation or contact, but by the direct introduction of the blood of a diseased animal into the system of a healthy one.

Some might oppose the view that it is a contagious malady, on the ground that it cannot be propagated by cohabitation. Anticipating this objection, I have made references to the peculiarities of other infectious diseases, and with some degree of confidence state that this disease is more infectious than Pleuro-pneumonia or Contagious Eczema, is inoculable like Rabies, Glanders, Variola, and Cattle Plague, is as wide in its scope as the contagium of Rabies, and more certain in its destructive effects. I refer to Splenic Fever, or, as it is generally called in this country, Apoplexy of the Spleen, the pathology of which is most interesting.

It is not my intention to refer to symptoms, but to call your attention to those organisms which are found to exist in the blood of animals affected with this malady.

"In 1850, MM. Davaine and Rayer noticed in the blood of animals which had died of Splenic Fever small microscopic organisms resembling transparent rods, but no importance was attached to the observation. Some time later Koch studied the habits of these organisms, which are called the *Bacillas Anthracis*, and found the aqueous humour of the ox's eye to be particularly suitable for their nutrition. With a drop of the aqueous humour he mixed the smallest speck of a liquid containing the rods, placed the drop under the microscope, warmed it suitably, and watched the subsequent action. During the first two hours hardly any change was noticeable, but at the end of that time the rods began to lengthen, and the action was so rapid that after the lapse of three or four hours they had attained from ten to twenty times their original length, and at the end of a few additional hours had formed filaments in many cases a hundred times the length of the original rods; and further on it was seen that within the transparent rods little dots appeared; these became more and more distinct, until the whole of the organism was studded with minute ovoid bodies like peas within their shell. After a time the integument fell to pieces, the place of each rod being taken by a long row of seeds of spores. Koch proved that these spores, as distinguished from the rods, constituted the contagium of the disease in its most deadly and persistent form. Inoculating animals with the fresh blood of an animal suffering from Splenic Fever, he found that they invariably died within twenty to thirty hours after inoculation. Drying the infectious blood containing the rod-like organisms, in which, however, the spores were not developed, he found the contagion to be fugitive—maintaining its power of infection for five weeks at the furthest. He then dried the blood containing the fully developed spores, and exposed it to a variety of conditions. He permitted the dried blood to assume the form of dust, wetted this dust, allowed it to dry again, permitted it to remain for an indefinite period in the midst of putrefying matter, and subjected it to other tests. After keeping this spores-charged blood, which had been treated in this fashion, for four years, he inoculated a number of mice with it, and found its action as fatal as that of blood fresh

drawn from the veins of an animal suffering from Splenic Fever; and every spore of the millions contained in the diseased blood is competent to produce the disease."—*Tyndall.*

The blood of animals affected with Splenic Fever always contains the staff-shaped bodies, if examined at a sufficiently advanced period; although in the earlier stages of the disease they are not discoverable, being either not present, or, at all events, not in such numbers as to admit of their being made out microscopically, yet the disease can be transmitted by such blood, and it has been found that the organisms are quite as numerous in the animals inoculated by the injection of blood which was free from organisms as in others. It is, however, proved that the contagium as it exists in the circulating fluid is very transient, losing its activity from the moment the blood begins to show signs of putrefaction. Brauell made experiments for the purpose of determining at what period after death this took place, and found that such blood lost its activity in from three to five days. It is only when the filaments and spores are developed, and putrefaction prevented, that the contagium is persistent.

The foregoing observations prove conclusively the contagious nature of Splenic Fever. It has also been proved that it can be transmitted to animals of a different species, and even to man, by inoculation; "but it is not known that it can be communicated in any other way, for animals kept in the closest proximity to diseased ones, and placed under the most favourable conditions for infection through the air, are not infected" (*Sanderson*).

In proof that Splenic Fever originates spontaneously, I will relate the circumstances of three outbreaks with which I have had personally to deal. I limit myself to a brief history of these three outbreaks, not because I have not had to deal with several others, but because they are typical of all outbreaks that I have read or heard of in this country.

The first occurred when I was practising at Bradford. A dairyman whose cattle I attended regularly sent for me at six o'clock one morning—the messenger stating that one cow had been found dead, and two others very ill. On arriving, in the course of half an hour, at the byre, I found two dead cows and

the third *in articulo mortis*—in fact, she expired in a few minutes after my arrival. In the course of a few hours a *post-mortem* examination was made of the three carcases, and Apoplexy of the Spleen was found in each. I need not detain you by describing the pathological anatomy of the malady. During the day a fourth cow was taken ill, but she recovered; and early on the following morning I was sent for again, and arrived in time to see yet another cow in an expiring condition. The *post-mortem* condition of this animal differed from that of the other three. The spleen was not enlarged, but the intestinal canal was highly congested, there was extravasation of blood into the canal, and great engorgement of the lungs and right side of the heart, the blood having a tar-like appearance, as in the cases examined the previous day. On inquiring into the history of these cases, I was informed that, being rather short of milk, the owner had been forcing the animals with an extra quantity of bean-meal and fine sharps.

The next outbreak appeared in Scotland, in the month of August, in a lot of dairy cows which were out at pasture. The weather, for some weeks previously, had been exceedingly warm and dry—in fact, no rain had fallen for a considerable period, and the pastures were almost burnt up. To prevent the animals falling off in milk and condition, a liberal allowance of cake had been given them. A few days before the outbreak rain had fallen in abundance, and the grasses had sprung up as if by magic,—where pasture had been scarce, it was now abundant,—but those connected with the cattle took no heed of this, and still allowed the linseed cake.

Three cows had succumbed before I saw them. The veterinary surgeon in attendance, a thoroughly practical man, could make nothing of the disease—never having witnessed anything like it before, although he had been in the district for over twenty years. The *post-mortem* revealed Apoplexy of the Spleen in the three dead animals. A fourth was ill, had been bled, seemed to be rather better, and finally recovered.

The third outbreak occurred in Berwickshire, and has the following brief history. A farmer had housed about fifty head of cattle, varying in age from eighteen months to three years,

for winter feeding. At first the animals throve as well as could be wished; but after the lapse of a few weeks several died, without presenting any symptoms of previous illness, whilst others were seen to tremble or shudder, to have twitchings of the superficial muscles, succeeded by accelerated and difficult respiration, convulsions, and death. In some cases there were hæmorrhagic alvine discharges, in others blood issued from the mouth and nostrils; whilst the younger stock were affected with lameness, accompanied by extravasations into the subcutaneous areolar tissue. Suspecting poison, the viscera of some of the dead ones were subjected to chemical analysis, but nothing deleterious was found. After twenty-two —if I remember correctly—had succumbed, I was requested to attend. *Post-mortem* examinations at once revealed the nature of the disease: in the older cattle Apoplexy of the Spleen was present, and in the younger extravasations into the areolar tissue, particularly of the sub-lumbar, scapular, and sub-maxillary regions—proving that the older had died from Splenic and the younger from External Charbon, whilst in all there was congestion of the pyloric orifice of the stomachs, with submucous extravasations, spots, and patches. On inquiring into the history of the outbreak, I learned that the food had been most nutritious in quality and over-abundant in quantity: turnips and cakes of various kinds, but particularly the decorticated cotton cake, had been most liberally supplied; that, as already stated, the cattle had thriven most rapidly, but that the best and most forward in condition had, all along, died first. "Aye, the best gang first!" was the remark made by the hind.

In the outbreaks specified, it will be observed that the common cause of the disease in all three was over-feeding on a highly nitrogenous diet. It may be also stated that the steps taken for the purpose of preventing further attacks were attended by the happiest result—the means employed being an aperient to unload the intestinal canal, short allowance of food for two or three days, and then a diminished supply of the concentrated and more of the bulky articles of diet, as straw. In no instance was there any change in the articles of diet, as one would have been in duty bound to order if any suspicion were attached

to the quality, or if they contained the germs of the disease—but simply a diminution of the one and an increase of the other ingredients upon which the cattle had all along been fed.

Continental writers state that Splenic Fever is also caused by fodder and water contaminated by decomposing organic matters, and by the influence of morasses and stagnant waters. The history of the outbreak which lately occurred at Newcastle points to the correctness of this conclusion; but as Mr. Stephenson is present, perhaps he will be good enough to say something upon this point.

Basing my argument upon the foregoing facts, I think that the only tenable conclusion at which we can arrive is that one disease—contagious by inoculation, or by food and water contaminated by the morbid products of animals which have died of it, and capable of being thus transmitted not only to animals of the same species, but to others and to man—has been clearly traced to owe its origin to other causes than infection; that, in fact, it originates spontaneously. If this be the case with a disease quite as contagious as Rabies, and whose contagium acts in a similar manner, may we not conclude that Rabies, Glanders, Variola Vaccina, and Canine Distemper—diseases which are highly contagious (without speaking of others which are yet on debateable ground)—do also originate spontaneously in this country, and that Pleuro-pneumonia, Contagious Eczema, the Cattle Plague, and Variola Ovina—diseases which are allowed by the great majority of observers to be incapable of originating in Great Britain—may and do originate spontaneously in other countries?

It would be beyond the scope of an address of this kind if I were to attempt to trace the genesis or the mode of production of the organisms found in the blood of Splenic Fever. That they are rare and uncommon organisms must be admitted; and I think that this rarity, and the fact that they disappear from the blood upon the advent of putrefaction, point to the conclusion that they are not due to germs which are mysteriously floating in the air, ready to prey upon a beast whenever they find one congenial to their taste, but rather to an archiebiosis or a spontaneous generation occurring in a complex fluid, such as the

blood becomes in animals fed as those to which I have referred. That these organisms play a most important part is beyond a doubt, and that they are capable of inducing the disease even after a lapse of years has also been proved; and looking upon them as perhaps the cause of the malady in all instances, I think we shall do more good by turning our attention to discovering those conditions which are favourable to their origin and development, and by destroying these conditions prevent a recurrence of a malady so destructive in its effects and capable of so wide a range of operation. If we are satisfied with the postulate that contagious diseases do not arise spontaneously, we shall do but little to arrest further outbreaks of such diseases as the one under consideration; and shall nullify the teaching of Coleman, that by confining a horse in a dark and dirty stable, and feeding on bad provender, Glanders could be produced at will.

How some writers have concluded so positively that contagious diseases cannot arise now spontaneously, is beyond my comprehension; many of these diseases are not yet proved to be due to the influence of any living organisms, and even if they were due to such a cause I do not see why living organisms may not now, as in the past, originate *de novo*, provided that the conditions are similar. To believe otherwise seems to me to be inconsistent with the uniformity of the laws of nature; for what gave origin to a cause of a contagious disease in the far distant past may do so even at the present time. If this be not true, how is it that the *Bacillas Anthracis* is developed in the blood of an animal in which impossibility of infection has been over and over again determined most conclusively?

AMPUTATION OF THE METACARPUS IN A COW.

BY W. E. LITT, M.R.C.V.S., SHREWSBURY.

ON the 8th of August last year, I was somewhat hurriedly sent for to see a two-year-old shorthorn heifer, the property of John Evans, Esq., of Uffington, Salop. I found the animal

standing in the middle of a field on three legs. A glance sufficed to show me that the off fore-leg was hopelessly fractured; and on more careful examination, I found that that part of the shaft of the metacarpal bone which is comprised in the middle third was reduced to a mass of splinters. The owner was particularly anxious to save the animal's life, as she was one of a very choice strain of blood. As it appeared to me to be quite hopeless to think of union ever taking place, I decided to amputate. Having directed that the heifer should be taken from the open field to the farm-building, which was at no great distance, I returned home for the necessary instruments, and with as little delay as possible proceeded to operate. Having cast and secured the patient, she being placed to lie on the near side, I selected the most powerful man present (he being a brawny waggoner), and directed him to take his seat on the side, or rather on the shoulder of the heifer, with one leg on either side of hers, and firmly grasping it with both hands. I then placed a tourniquet on the limb immediately above the knee, the compress being of course placed immediately on the radial artery, the pulsation of which could be distinctly felt. The preliminaries being thus completed, I commenced my incision by passing the knife directly through the leg as close to the back of the metacarpal bone as possible, the edge of the knife being towards me, and about an inch and a half from the head of the bone. By then cutting downwards and backwards, the knife was brought out some three inches lower down, at the back part of the leg. I then proceeded to make a similar flap anteriorly. This was a work of greater difficulty, as there is little more than skin in front of the shin, and this had to be dissected back. However, by the exercise of a little patience I managed to make a satisfactory flap. These two being held back by an assistant, the shaft of the bone was immediately severed as high as it was possible to reach with the saw. The artery was then tied, and the two flaps brought into apposition and firmly sutured with double-strong thread sutures. A large pledget of tow was then placed on the end of the stump, and secured with some seven or eight yards of roller bandage of unbleached calico. The patient was then released, and immediately jumped up. She was

placed in a loose box and supplied with green food and bran mashes. The bandages were left intact until the eighth day, the animal in the meantime being perfectly comfortable, and feeding the whole of the time just as though there were nothing at all the matter. As I have said, on the eighth day following the operation I removed the bandages, and was pleased to see that union had taken place in about the upper two thirds of the wound, both on the inner and outer side. The sutures at the end of the stump had, however, broken out, and the end of the bone was exposed. From this there was some little discharge, rather fœtid, but not much in quantity. A pledget of tow saturated in some mild carbolic dressing was fastened on by means of a narrow roller bandage, and changed daily for about ten days, when it was altogether discontinued.

On the 8th of September I made an examination of the stump, and found that it was to all outward appearance completely healed over: on looking into it, however, more carefully, I saw that the circular rim of bone at the end of the shaft was not completely covered in by the granulation, although this itself had become tolerably hard and dry. I fancied, too, that the end of the bone seemed to be loose or getting down to it. This proved to be the case, for on laying hold of it with a pair of forceps it readily came away,—a ring of bone. After this the stump soon became perfect. Having succeeded beyond my expectation in disposing of the damaged limb without interfering with the patient's general health, I began to think it was time to get an artificial leg, to supply the deficiency thus created, although I must say that it was perfectly marvellous how well the poor animal hopped about on the other three—lying down and getting up without the least trouble or difficulty. Having taken the precise measurement of the stump, the knee joint, and the arm immediately above, I applied to my saddler, who readily constructed what must be called a perfect masterpiece in the matter of artificial legs.

I regret exceedingly that my powers as a draughtsman are so limited, as to utterly preclude the possibility of my even attempting to give you a sketch of the wooden leg. Suffice it to say that it differs in no material particular from the ordinary

human wooden leg, and is easily and securely fastened by means of a broad strap round the leg, immediately above the knee. The socket into which the stump is received is lined with soft leather, and padded out with wool, and is sufficiently deep to admit also the lower part of the knee-joint, but does not in any way interfere with the flexion of the joint. The animal can walk, lie down, and get up with perfect ease, and is to all intents and purposes just as well off with the artificial leg as it was with the natural one. I see no reason why it should not become the mother of any number of calves; but whether it should prove successful for breeding purposes or not, one thing is quite clear from its present forward condition—that it will make a very useful animal to the butcher. I should add, perhaps, that the artificial leg is not constantly worn. Experience has shown that there is no necessity for it when the animal is indoors. When she is required to go out, it is the work of a few seconds only to buckle on the leg. As the subject of amputation is one which has scarcely been considered a part of veterinary surgery, the recital of the above case will doubtless call to the recollection of many practitioners similar cases where the operation might have saved the lives of animals more or less valuable, but which were sacrificed.

FOREIGN BODY IN THE HEART OF AN OX.—HAIRY EXCRESCENCE ON THE CORNEA OF A DOG.

BY J. M. PARKER, M.R.C.V.S., BIRMINGHAM.

THINKING that the following cases may be interesting on account of their rarity, I send particulars of them.

On Feb. 3rd, 1877, I was called to attend a cow at Oscott College farm; and on my arrival, at 10.45, I found the animal—a two-year-old heifer with her first calf—in a very low state: extremities cold, pulse barely perceptible, secretion of milk arrested, profuse diarrhœa, and some impaction of the rumen. She was continually moaning and grinding her teeth. Her

appetite had been good up to the previous day; but the moaning had been noticed at intervals for three weeks—that being the time she had been at the College farm. The cow was evidently in severe pain, and I stated my opinion that she had swallowed some sharp foreign substance which caused pain. The attendant then said that she appeared hungry, but was unable to swallow on *that* morning, the 3rd. I tried her with a little hay, but she would not eat it. I ordered her some gruel, sent her a diffusible stimulant, and left her, saying that I had fears she would not recover. On going again, I was told that she died the same day, at 4.30,—"as if she was asleep," to use the cowman's words. He had kept the heart, liver and lungs. The two latter organs were slightly congested. I carefully examined the heart, seeing at a glance that it was inflamed; and found embedded in the right auricle, at the base, and lying parallel with its walls, a piece of bone one inch long, two-fifths of an inch wide, and about one-tenth of an inch thick, with a square serrated edge at one end, and shaped like the point of an abscess lancet at the other end. The valves of the heart were in a healthy condition. The ventricles contained a quantity of fluid blood, and the lining membrane of the right auricle (especially under the bone) was nearly black.

Unfortunately the organs named were the only parts left for me to examine, and the heart had been interfered with to some extent before my arrival. There was, however, sufficient mischief in it to account for death.

In June, 1875, a setter puppy, three months old, was brought to me for advice about one eye—the left—which was discharging a considerable quantity of muco-purulent matter. On washing the eyelids and carefully examining the eye, I found that the whole of the eyeball was covered with long black and white hairs (the puppy was black and white), spread out like a fan. With some trouble I fixed the eyelid and found that the hairs grew from a warty substance as large as half a pea on the cornea, at the posterior part of the eye, near the eyelid, but not connected with it. I plucked out thirty hairs with the forceps, and sent some lotion containing laudanum and zinci sulph.

In about a fortnight I saw the patient again, and he was reported as having improved considerably. This I found to be the case; and I removed a few more hairs—twelve or fourteen, perhaps. He was not brought to me afterwards, but I heard from his owner that all pain and discharge had ceased. Having occasion to pass the owner's house in September, 1875, I called to see the pup, and found that the eye was much inflamed, and a fresh crop of hairs had grown. I then determined to pare off the "wart,"—for such it seemed to be; but how to do it without chloroform or proper instruments was the question. I decided to transfix the base of the wart with a needle and cut it clean off the cornea with a scalpel. Making a hook of a silver probe, to steady the lid, which was held by an assistant, I was able, after a little trouble, to pass a strong sewing-needle, armed with a stout thread, through the base; and pulling it away from the cornea I dissected the growth very carefully from its attachment, and effectually eradicated it. No more hairs made their appearance, and the wound speedily healed. There was, unfortunately, a considerable deposit of lymph in the eye, from long-continued irritation, which perhaps might have been prevented had I excised the portion at first. I may add, in conclusion, that it was horny to the touch, and not like transplanted skin, which the presence of coloured hairs would appear to indicate.

EPIZÖOTY IN POULTRY.

BY J. W. T. MOORE, M.R.C.V.S., LIVERPOOL.

HAVING noticed in the *Veterinary Journal* for February two articles on the above subject, I am induced to send you a short account of a similar epizoöty, which was brought under my notice in this town.

Captain Flinn, one of the managing directors of a large shipping company at this port, mentioned in November last that he had lost a great many valuable fowls, and asked my opinion as to the cause of the mortality. I learned from him the following history of the disease. He had purchased twenty-four half-

starved Irish ducks about four months previously, and which were put amongst his other ducks. During the first twenty-four hours nine of the Irish ducks were found dead; and from that time not only the "home" ducks, but the other poultry died in the same unnaccountable manner; and in a few months he lost 250 fowls.

The food was Indian corn and meal, wheat, oats, etc.; the roost was well fitted and ventilated, and the run spacious.

In some fowls the first symptoms noticed were—lying flat on the chest, tenesmus, and evacuation of a watery fluid, occasionally tinged with blood; if disturbed they attempted to walk, but fell, and they frequently dropped dead within half an hour from the first appearance of the symptoms. In others the attack lasted as long as two and three weeks, during which time food was refused, and they became very much emaciated.

It was noticed that those which died soonest were the fattest, and apparently the healthiest birds. A veterinary surgeon, who was consulted, gave it as his opinion that they died from Inflammation of the bowels, due to something in the food.

It may also be interesting to state that, in order to try the effects of a change of run, and with a view of saving some of his best fowls, Captain Flinn sent down forty of them to Huskisson Dock, where they were put along with the poultry of the Company's Marine Superintendent. This, however, instead of staying the progress of the disease, communicated it to those of the Marine Superintendent, every one of which (twenty in number, and previously perfectly healthy), as well as the forty sent down, had in the course of five weeks perished from the disease.

Having obtained two fowls, I, along with Mr. Watson, M.R.C.V.S., made a *post-mortem* examination, and found the appearances of the liver and intestines exactly as described by Professor Piana: in addition, we discovered amongst the ingesta, in a considerable portion of the bowels, a large number of thread-like worms about half an inch in length, most of which were alive. Professor Piana makes no mention of worms in the intestines, and does not describe the microscopical appearances of the white spots in the liver. The former he may possibly

have overlooked, but the latter would have been interesting to ascertain.

From the *post-mortem* appearances of the structures, and the contents of the intestines, Mr. Watson and I simultaneously came to the conclusion that the disease was of parasitic origin, —which opinion was afterwards endorsed by two veterinary surgeons who had the opportunity of making a *post-mortem* examination of other fowls.

Taking this view of the malady, I recommended the administration of turpentine, and I am happy to state that after this course was adopted only two fowls died out of seventeen. It is now two months since, and the fifteen continue healthy. The turpentine was given in two-drop doses night and morning.

I may state that before the above treatment was recommended, sanitary measures were adopted during the progress of the disease, but without any apparent result.

INFLUENZA.—OZÆNA.—TUBERCULOSIS.—FARCY AND GLANDERS.

BY W. A. COX, ARDWICK, MANCHESTER.

IT may be asked—What are the connections or links between these maladies? They are diseases that are extremely troublesome, frequent, and often *insequitur*. It is at this period of the year, especially if the season is wet and the temperature high, that Influenza prevails. It is met with both in its simple and complicated forms. The simple form is attended with cough, sore throat, tumefied glands, and a discharge from the nostrils. It is not difficult to treat. Rest, good ventilation, warm clothing, fever and cough medicine, and a demulcent diet, with the use of the hot-air or camphor-vapour nose-bath, will, as a rule, speedily restore to health. In a few instances the discharge from the nose continues after the other symptoms have subsided. Most probably the spirits and condition of the animal are such as to induce the owner to work it, or to neglect or

avoid warning the veterinary attendant of this; or even treatment fails to arrest it, and in a short time it develops into true Ozæna.

There are so many *complications* of Influenza, that to notice all of them I should trespass too much upon space. I will advert to one that, from the low, prostrate condition of the vital powers, attended with symptoms of Fever and generally of Catarrh, I have ventured to call "Typhoid Influenza." In this guise it has ravaged town stables for a number of years, and some time ago was called the "French Distemper," having visited Paris prior to its appearance here. Without doubt it was this form of disease that created such a *furore* some few years ago in the American cities, especially in New York.

It is insidious in its attack; the animal is sometimes unwell, "out of sorts" for a day or two, but no marked indications of disease are seen. The visible symptoms following are shivering or abdominal pain, seldom so violent as a mild attack of Colic, but what may be termed "uneasiness"; this passes away, and is succeeded by languor, impaired or lost appetite, drooping head, cold, doughy skin and extremities, injected membranes; occasionally a flow of tears from the eyes and discharge from the nose; the mouth is hot and the saliva viscid; the pulse numbers from 50 to 80 or 90 in the minute, is irregular or intermittent, and sometimes so small as to be scarcely perceptible. In many cases the throat is sore; in others the glands are enlarged, and a cough is present. The bowels are torpid and the fæces coated, and masses of fibrinous matter voided with them. In some instances there are early indications of thoracic disease; the symptoms enumerated are most or all present; in addition, we have more or less disturbed and accelerated breathing, often attended by a catch or grunt; the mucous membranes are more injected, the pulse very small and rapid, and there is a painful attempt to cough. Again, we see others with the mucous membranes of a yellow tinge, with intense nausea, evidenced by frequent gaping or rolling out the tongue and a flow of saliva; the urine is scanty and darker than natural, and the fæces small, coated, and dull clay-coloured; occasionally, in connection with all or any of the above, we find great stiffness of the extremities, with

general infiltration of the areolar tissue in them, or the joint capsules are distended and painful under pressure; the back is arched, and the hind-legs are advanced, and progression is painful. In a few instances the limbs are the seat of the disease, the other symptoms being concomitant. In some animals the brain and nervous system has been primarily and principally attacked.

Thus it may be said to assume a pneumonic, a biliary, a rheumatic, and a cerebral type—the first being most frequent. We may have all these types amongst a limited number of animals in one stable, or all the cases may assume one character.

The death-rate is greatest in aged and young animals; if attended to at its earliest stage, it is not necessarily a fatal malady. It is in the pneumonic form that unfavourable terminations are most frequent; in all forms we find that convalescence is retarded by extreme debility and fickle appetite, and we are annoyed to find that tubercles have been imperceptibly forming, or that effusion has taken place. That Tuberculosis is the final sequel of this malady, or as a disease *per se*, is uncommon; it is the forerunner or concomitant of another disease hereafter to be mentioned. If it occurs, it is more often in succession to this disease than any other, and the death of the patient is attributable to hectic, the result of accompanying debility; if the strength of system is sufficient to allow of true development, it would in almost all instances terminate in Farcy or Glanders; this is especially the case under circumstances favourable for their development. It is *not* uncommon for partial restoration to health to take place; the more acute symptoms have subsided, leaving our patient weak and languid, but the appetite is improved, and although the breathing is not normal, it is not quick or hurried; this continues for some time, and it is only by careful auscultation that we can discover that disease is making progress in the lungs. After a certain period, that varies considerably, the cough—that has probably never entirely subsided—becomes worse, the discharge from the nose reappears, and in a short interval small tumefactions are observed; these may appear about the head or extremities, and sometimes on the body;

they vary in size and sensibility. In from twelve to thirty-six hours they burst, the discharge being ichorous; they then present an irregular sulcus in the centre, with a thick, lividly-inflamed circumference, raised so as to be prominent—the "true Farcy-bud."

It is not denied that during the earlier stages correct diagnosis is difficult; but if possible such cases should be isolated.

I had not intended to speak of the treatment of these maladies; but a conversation I had with a junior member of the profession, who had received the rudiments of his education from a distinguished Professor, induces me to do so, and it will be as concise as possible. After describing the symptoms, and asking him to suggest the treatment, to my astonishment he replied, "Take a little blood, and give a small dose of physic—say two or three drachms of aloes." This method, if adopted, would be most effectual, for it would speedily end the patient's life! Ventilation, revivifying the box with hot air daily, warm clothing, a negative rather than a positive system of treatment, using such agents as Sulph. Mag. c. Spts. Nit. Æth., Ext. Belladonnæ, Liq. Ann. Acetas., and others, giving as support gruel, with whisky, porter, beef-tea, or milk as required, is the most effective.

Farcy and Glanders, pathologically considered, are one malady, the distinction being in the *locale* of the disease, or rather its appearance. They are, speaking in the double sense, so infectious as to necessitate the destruction or isolation of those suffering from them. After the able paper on the subject read by the editor of this *Journal* before the Midland Counties Veterinary Medical Association, and afterwards published in the March number, I shall not enter very fully into the matter, except to give a few practical observations that have occurred to me.

The Causes of Glanders and Farcy are primitively the maladies before enumerated, occurring in dyscrasic systems, or when exposed to unfavourable influences, such as want of ventilation, continued foul or fœtid gas, or aggregation. It is acknowledged that this is an indigenous malady, and one that horses are specially liable to. Many outbreaks, were inspection strict, would

be found to be the result of chronic glandered horses being allowed to work associated with others, often drinking out of the same pail or trough; that all in contact do not become diseased is no proof that the suspected animal is not affected with this malady. This is specially operative in spreading the disease among cab horses.

It has been suggested that every driver should be supplied with a zinc pail, and that when watering his horse he should directly run the water from the tap into it, and on no account take the water from the trough; this is a good system, if dependence can be placed on the men. Another plan would be to place responsible men in charge of the troughs, to see that this was done; but it would entail considerable expense.

Large stables, capable of containing many horses, are now common; but however lofty or well ventilated or clean, we find outbreaks of disease more frequent in them than in smaller stables containing fewer animals, even when the latter are apparently more likely to develop disease. Again, we must consider that if contagious disease appears in a large stable, there is danger of infection that would not exist if there were partition walls; the entire stud are liable if in a stable common to all.

Referring to horses with chronic nasal discharge, inspection would show that many such animals exist, and it would also prove that scores of animals are slaughtered so affected, or having Farcy, that are not reported. This might be remedied by requiring inspection of horses on cab-stands, at the various large stables, and of the carcases at the knackers' yards, and a return or report being made of the same. Cab proprietors —in fact, all horse-keepers—would afford an inspector every assistance.

Where horses are constantly stabled, even when disease does not exist, it is advisable to use hot air to cleanse them; this might be done with a coke stove, at least once a month; it would destroy the animalculæ, render ineffective the spores, besides drying the walls and floors, and preventing the development of mould; the litter, whether straw or sawdust, should be entirely removed, or rather mixed and exposed, daily; the small accumulations that get into the crevices of the floor and

stall are, when saturated and allowed to lie, likely to develop disease. Where disease exists, it is best to remove all litter daily, and to purify the place with chlorine gas; the walls should be scraped, washed with carbolic acid and water, and afterwards lime-washed, adding to this carbolic acid.

(*To be continued.*)

VETERINARY OBSTETRICY.

BY G. GRAY, M.R.C.V.S., BAKEWELL.

THE practical remarks on the above subject by Mr. Cox, in the February number of the *Veterinary Journal*, induce me to record my experience of a case of Ascitis, or dropsy of the belly of the fœtus. I believe, as Mr. Cox says, that it is rarely met with; in nine years' experience I have only encountered one instance of it. I remember my father having a case nearly twenty years ago. Last year I was requested to attend a case of difficult labour. I was informed that the calf was coming all right, but that they could not get it away. On examining the position of the fœtus, I found a natural presentation; the cow at the time had strong labour pains, but was unable to propel the fœtus one single inch. Thinking there might be twins, I made a further examination, and then discovered the abdomen of the fœtus to be very much enlarged; so I at once concluded I had got a case of Ascitis to deal with. I hesitated for a moment as to what I should do, being unprepared for such a case; at last I concluded I had but one alternative—viz., to cut through the walls of the abdomen and allow the fluid to escape. This I did by the aid of an embryotomy knife (the kind of knife I find of most practical value is similar to the one Mr. Cox describes, only the blade is straight). I made an incision about three inches long, immediately behind the ribs, and a little above the sternum, trusting, as Mr. Cox says, to the contraction of the uterus to expel the water. I then applied gentle traction, but the fœtus was still immovable. I therefore increased the traction, when sud-

denly it came away all at once. I found, on examining it, that the walls of the abdomen had burst at the flank, where they were very thin, and the opening I had made, with the view of allowing the water to escape, I could see was entirely useless; because every parturient throe propelled the fœtus into the passage, and the incision coming against the brim of the pelvis prevented the water escaping, while it pressed it to the posterior part of the abdomen, where, finding no exit, the walls gave way. In the case my father had, the walls ruptured in a similar manner to this one. I venture to say that unless the opening be made toward the posterior part of the abdomen (which in the majority of cases would be difficult to do), it will be useless. I am also of the same opinion respecting Professor Simonds' instrument: before you could insert such a long instrument down the throat you must have the fœtus upon a plane; in this case, if I had inserted it down the calf's throat, it would have come in contact with the vertebræ about the middle of the dorsal region instead of entering the abdomen. The position of the posterior quarters of the fœtus was like those of a dog in a sitting posture; and besides, as Mr. Cox wisely remarks, the movements of the fœtal viscera would obliterate the passage. I shall adopt in future a long trocar and cannula; these to be inserted in the chest, passing through the thorax into the abdominal cavity, then withdrawing the trocar and leaving the cannula to allow the fluid to escape through it. This occurs to me as the most likely method of dealing with such cases. I have only seen the first two parts of Mr. Fleming's work on Obstetrics: very probably he may recommend an instrument superior to any adduced. Doubtless, every practitioner who has any taste or love for his profession must feel the loss he yearly sustains from the want of proper instruments in cases of difficult labour. A great many of the instruments recommended are of little use. Take the embryotomy knives, for instance: not one of those I have seen are of much value when we have any part of the fœtus to cut away—say a leg, or the head. The general way of taking off a fore-leg, by skinning it up over the shoulder and then drawing it away by sheer force, is anything but satisfactory,—indeed, I consider it a barbarous operation. I never saw it done without

the vagina being very much bruised and swollen afterwards; and to cut away a hind-leg with an ordinary embryotomy knife at any joint, is next to an impossibility. If it could be as easily done as it is described sometimes in the witness-box, it would be a great blessing for some of us unfortunate practitioners, and perhaps would save us from being mulcted to the extent of three or four hundred pounds for damages. I am convinced we can contrive instruments that would tend to lessen the manual labour, and also the mortality attending difficult cases of parturition. I think there can be an instrument devised capable of disjointing any part of the fœtus, and also a knife capable of cutting through the muscles of the thigh or shoulder with facility and safety. If we had instruments more suitable for the operations we have to perform, we should be better paid, and our services more appreciated by our employers. At any rate, we should not be so liable to be sued for malpractice. I may say that every case I have lost, without exception, might have been saved, had I possessed the proper means for effecting the delivery of the fœtus. I do trust Mr. Fleming's work will be the commencement of a new era in Obstetricy, and I sincerely pray it may justify my expectations.

NÆVI VASCULOSI IN THE COW.

BY LANCELOT T. BARKER, M.R.C.V.S., SKELTON-IN-CLEVELAND.

On the 17th of last January, I was called to see a white milch cow, the property of Mr. Ralph Agar, of Sparrow Park farm, Marske-by-the-Sea; the messenger stating that the animal had broken a bloodvessel. On arrival, I found the cow in an anæmic condition, with the visible mucous membranes blanched, and great debility present. My attention was directed to a fungoid-looking wound in the skin, about midway between the anterior spinous process of the ilium and the tuberosity of the ischium. At the first glance I thought it was a large wart or "angleberry," it being slightly raised above the cuticle; but on closer inspection I discovered it to be an indurated, circular, subdermic tumour.

I therefore removed the clot of blood that covered its surface, considering it to be a *Nævus* or vascular tumour. No sooner was this done than a jerking stream of arterial blood squirted with great force across the stall. I was informed that it had frequently done so before, but on each occasion the hæmorrhage had ceased spontaneously—though the cow was every time very much reduced in strength and condition.

As a remedial measure, I inserted two long straight pins deeply through the skin—one crossing the other at right-angles at the centre of the spot; a piece of cord was twisted round the pins, so as to strangle the skin occupied by the bleeding formation, and this arrested the hæmorrhage. On further examination, I found several nævi on the opposite side of the body; these varied in size, and on removing the clot from those which had bled, and the epidermis from those which had not, streams of arterial blood jerked out of each.

I applied a little of the solution of perchloride of iron to these hæmorrhagic patches, and prescribed tonics, with a liberal diet; at the same time the cow wore a "cradle" on her neck, to prevent her licking the parts.

This treatment appears to have been successful, as the animal now feeds well, and has greatly improved.

[The occurrence of Nævi in animals appears to be extremely rare, as we cannot find any notice of them in English veterinary literature, and in foreign literature they are barely mentioned. Their rarity in comparative pathology can be easily accounted for, and we are much indebted to Mr. Barker for furnishing us with what we believe to be an exceedingly exceptional case of *Arterial Nævus*.]

FRACTURE OF THE FEMUR.—POISONING BY CARBOLIC ACID.

BY "NEMO."

PERUSING Mr. Naylor's case of Fracture of the Neck of the Femur in the *Veterinary Journal* for November, likewise Mr. Olver's,

I am induced to copy the notes from my case-book of a similar fracture that occurred whilst firing a six-year-old cart-mare exactly three years since. Just prior to completion of the operation the animal struggled violently, and I distinctly heard the fracture of a bone as its result. Instantly I released it from the hobbles, and with extreme difficulty she assumed the erect position. In attempting to return to the stable she reeled and trembled violently, only reaching it with assistance. On examination, I told the owner that it was a fracture of the neck of the femur, and advised her immediate destruction. He stated that it was an accident, and he could blame no one; but as she was a favourite, and a fine-shaped animal, she might be got round to breed a foal and pay the veterinary surgeon's bill. At his request I placed her in slings without delay, applied a strong blister around the part, and ordered a liberal diet. Calling on the 1st of March, I found her resting comfortably in the slings, and noticed that the blister had acted freely; she placed her foot on the ground, but threw no weight on the limb. As the appetite was good and the secretions healthy, I gave orders to continue the diet and bathe the leg occasionally, to reduce the slight tumefaction therein. Hearing twice a week from the owner that the patient was progressing favourably, I did not visit her again until the expiration of five weeks from the date of the accident. On removing the slings, I noticed that a fair proportion of weight was thrown on the limb; though she moved lame on being brought out, but evinced no pain on pressure or progression. The muscles were somewhat atrophied, and the hip slightly down, and I was doubtful if the owner's anticipations would be realised. She was kept in the bay of a barn for the ensuing three weeks, a proper shoe was adjusted to the foot, then she was sent to pasture, put to the horse, and proved in foal. She was now put to light farmwork in autumn, and has gone on well since, being still on the same farm, and in foal again this season, —thus showing that Nature is often the best doctor.

Not long ago I was just in time to see the toxic effects of Carbolic Acid in the following instance:—A black mare, the property of a brewer, had Ringworm, and the horsekeeper and

manager assured his master that he could soon cure that without the aid of a veterinary surgeon. Accordingly, they mixed one part of acid with six of water, and dressed the animal, rubbing it in with a brush : this was about six p.m. They placed the mare in a box, where she soon evinced by her actions the effects of such a dressing. After four hours warm water and soap were used to remove the mixture, and she was lubricated with oil. Still they could do without, or probably feared, the intervention of a veterinary surgeon, and so the poor animal lingered on till between six and seven a.m. on the following morning, when death terminated her sufferings—the owner losing an animal of £60 value rather than incur the expense of medical attendance. "Serve you right," I remarked: "teach you better for the future."

INVERSION OF THE UTERUS IN A MARE.

BY P. BEATTIE, V.S., BOGFERN, ABERDEENSHIRE.

DURING last May I was requested to see a mare, eight years old, the property of a farmer in this district. It appeared the animal had foaled ; and nothing unusual was noticed until a few minutes subsequent to that event, when the after-pains, from the retained membranes, forced out the uterus. The owner took the precaution to keep the protruded mass as clean as possible.

The mare remained in this condition for more than five hours before I arrived. After the membranes were removed, the uterus was bathed with tinct. opii and water ; and when the organ was returned, injections of these were freely applied for three hours. At the end of this period the " pains " had nearly subsided.

The mare was kept standing on a steep declivity—with the head of course downwards—for twenty-four hours. In three days she was convalescent.

TUMOUR IN THE BRAIN OF A HORSE.

BY W. WOODS, F.R.C.V.S., WIGAN.

In October, 1872, my attention was called to a black mare, six years old, the property of A. Hewlett, Esq. The coachman stated that, after having travelled a mile or so, the animal became very difficult to drive—constantly "boring" on the near-side rein. Upon examination I could detect nothing peculiar about her; so I was requested to drive the mare for a short distance myself.

Upon doing so, I found that she gradually increased the pressure on the near-side rein, as had been mentioned by the coachman; but a smart stroke of the whip would apparently rouse her, and set her straight in the road. I diagnosed the case as one of pressure on or in the brain, and recommended bleeding, with a good cathartic, to be followed up by small doses of calomel; as well as rest and change of diet, as the mare had been highly fed for the previous twelve or eighteen months.

As no improvement resulted from this course, however, and the coachman declined to drive her, as he considered her dangerous, she was put on the farm for further treatment. I now applied setons on both sides of the poll, and a strong blister. The mare slightly improved for a week or so, but when put to work rapidly became worse. I ordered her to be placed in a loose box, but held out no hope of her recovery; further treatment was deemed useless.

The mare gradually presented more unfavourable symptoms, and, almost without cessation, night or day, paced around the box—always turning to the left side. She was, however, easily controlled when held, and was evidently conscious when spoken to.

The day before she was destroyed, she escaped from the box, walked against some railings, pressed through them, and travelled into a deep pond—coming out at the other side; but she was easily led back again into the box.

At my suggestion the mare was destroyed; and at the *post-mortem* examination I found a large tumour in the right ventricle

of the brain. Unfortunately, the brain itself was damaged when being removed from the cranium by my assistant. Otherwise, I would have sent you the tumour with its attachments.

I may add that the mare fed tolerably well during the greater part of her illness.

[In January last it was our good fortune to visit Lancashire, and to experience the hospitality and share in the professional enthusiasm which distinguishes our colleagues in the great centres of industry in that important region. The visit was extremely brief, and we almost regret to say that it left little time for aught else than professional discourse and investigation. The tumour referred to by our friend Mr. Woods, attracted our attention when inspecting his museum, and it struck us as the largest cerebro-ventricular formation of the kind we had ever met with. Mr. Woods kindly forwarded the above history and the specimen after our return to Chatham; the specimen we shall, with his permission, present to the Royal College Museum, as we consider it a valuable one. After being kept in spirits of wine from the date of its removal until now, it weighs $1\frac{5}{8}$ ounce; in shape and size it is not unlike the egg of a fowl—measuring $2\frac{3}{4}$ inches in length, the width at its widest end being $1\frac{1}{2}$ inch.

The texture cannot, of course, be well made out now, but we are unable to discover any calcareous matter in it; and to judge from a superficial view, it would appear to be adipose in its nature.

We have on several occasions met with similar cases to this: the symptoms varying according to whether the tumour was in one or other ventricle, or a tumour in each; but in all the cases there was the one predominant characteristic—drowsiness or semi-unconsciousness, a tendency to push ahead in a kind of somnolescent way, or as if affected with somnambulism, or an automatic movement continually to the right or left, according to the location of the tumour in one or the other ventricle.

These cases are most interesting and valuable, but the pathological alterations should be attentively noted. More especially must the changes produced by the tumour on the adjacent parts of the brain be investigated with the greatest care; for we ought to remember that such cases are far more likely to throw light on the functions of the healthy brain than all the vivisection experi-

ments that could be devised—cruel as many of these are, and illusory as they also often are in their results. These cerebral tumours are in themselves, of course, valuable pathological specimens, but the lesions they produce in the surrounding cerebral tissue are still more important to the physiologist and pathologist, and deserve the closest examination.]

CARBOLIC ACID AS AN EXTERNAL APPLICATION.

BY T. D. BROAD, F.R.C.V.S., BATH.

IN the *Veterinary Journal* for October last there is an account of an accident arising from the external employment of Carbolic Acid by Mr. Simcocks, and in the January number of this year there are other accounts somewhat similar. The use of this acid for diseases of the skin of horses and dogs, regularly for about fourteen years, has given me some little experience of its toxic effects. In its early use, I had the misfortune to lose several dogs, but in every case it was the result of a defective method of preparing the mixture, the acid not being properly dissolved. I have seen, in one or two instances, swollen patches on the skin of the horse, somewhat resembling the effects of a blister, when the dressing has not been sufficiently diluted; but the effect soon passed off.

The following form is the one I have used for the last eight or ten years without a mishap:—No. 5 Carbolic Acid, ℥j., Sapo Mollis, ℥j., Aqua ℈j. Boil until the soap is dissolved, then add the acid, and as soon as the boiling point is again reached, set it aside. As boiling evaporates the acid, the above proportion, being one in twenty, is the proper strength for local application to the horse; but for general application dilute it to one in forty, by adding cold water. For dogs the local application is one in thirty, and for general application one in fifty. For cats not less than one in sixty. It requires about a quart of the mixture to dress all over the body of a short-coated horse of ordinary size; if the coat is very long it will take two quarts, which is

best applied with a soft brush, such as painters use. The dressing may be repeated every other day as long as necessary. One dressing is generally sufficient to destroy lice in horses or cattle. Large dogs, with long coats, require nearly as much as a horse. The most simple and effectual remedy that I have found for poisoning from Carbolic Acid, is to place the animal as quickly as possible under a stream of cold water, the tap of a cistern if convenient, or from a watering-pot with the rose on, and continue to apply the water as long as any symptom of convulsions remains. A valuable bulldog was dressed by one of my assistants some years since, and he immediately became convulsed and completely paralysed ; it required the constant application of cold water for nearly three hours before all the convulsive symptoms had passed off. However, the next day he did not appear any the worse for it. Three or four years since I was called to see a valuable greyhound that became convulsed after a Carbolic dressing by a veterinary surgeon, who immediately had the dressing washed off with *hot* water and soft soap, but the dog died during the process.

Paraffine, commonly called " Crystal Oil," is a very good and clear application, and may be applied alone to the tail or mane. I usually mix it with an equal quantity of Cod Liver Oil, for which I pay about five shillings per gallon in bulk. It is a very effectual remedy in obstinate skin diseases, if applied every other day for a week, or a little longer if the disease has existed for a considerable time. The first dressing will require about a quart, subsequent dressings a little more than a pint. I have known cases of skin disease in the horse and dog, in which the repeated application of Cod Liver Oil has had a better effect than the ordinary skin dressings. The advantage of the carbolic dressing is, that the horse can be worked during its application ; whereas with the oil dressings it cannot well be done, in consequence of its appearance.

As an internal medicine, especially when there is much Pruritus, balls made of Flour Sulph. and common tar—one to be given three times a day—will quickly produce a beneficial effect ; or when not convenient to give balls, give Arsenicum gr. iv., Flour Sulph. ʒiv., in a powder twice daily.

McDougall's or Calvert's "bar" soap, containing from eight to ten per cent. of Carbolic Acid, I use largely in the treatment of dogs, for destroying, and preventing their being infested by, parasites. In ordinary cases, I order them to be washed once a week; but if there are many parasites, or much irritation of the skin, they are washed every other day.

Carbolic Soft Soap contains generally a larger percentage of Acid, and is more suitable for washing horses affected with parasites or irritation of the skin; especially those cases of the mane and withers caused by the friction of the collar, and from which horses are often made very irritable. It is necessary to use warm water, as the soap does not easily lather.

"PUNCTIO INTESTINI" IN FLATULENT COLIC IN THE HORSE.

BY "A VETERINARY STUDENT."

THE very interesting article upon the above subject by Mr. Harthill, of Louisville, Kentucky, in the March number of the *Veterinary Journal*, gives opportunity to emphasize the fact that veterinary teachers in England fail in their duty, in that they take no pains to teach their students what is being done in other countries in our science. Without intending to give any practical information, the writer will endeavour to state very cursorily what he has collected in a few spare moments upon this subject.

The first notice he can find of this operation is by Vegetius, who lived about the fourth century, and who mentions having performed it upon horses suffering from "Wind Colic," and that the operation was performed about four inches behind the umbilicus. He says nothing about the anatomical position of the intestinal organs to be punctured, but he takes pains to say that the operation is not without danger, and that he does not recommend it.

The next to mention the operation is one Joh. Riem, born at Frankenthal-on-the-Rhine, in 1739. He speaks of having performed it successfully upon horses, and recommends the operation

for swine in similar cases. Bouwinghausen, a German, wrote favourably of the operation upon horses, in 1776.

Barrier, a Frenchman, who wrote about 1779, speaks of the operation as being perfectly safe, and that the practitioner should not delay too long before having recourse to it, if he expected to obtain good results.

Huzard speaks of the operation being performed by Bourgelat, Chabert, and others.

A few words about M. Huzard may not be uninteresting to the veterinary student. He was born in Paris in 1755, and died in 1838 ; and, he may, I think, be truly declared the greatest ornament of our profession during the first half of this century. He filled the place now so ably occupied by M. Bouley—that of Inspector-General of the French Veterinary Schools ; and he was noted among the scientific men of Europe for his culture and learning, and, like M. Bouley, he may be looked up to by the young men of our profession as examples of what study, perseverance, and application to some science may bring to a veterinarian. M. Huzard left an immense private library of about 40,000 volumes.

This little digression the writer hopes is pardonable, and, without quoting other French authorities of the present day, he will dismiss the subject, so far as the French are concerned, by saying that this operation is performed very usually by those masters of veterinary surgery, and is not considered peculiarly dangerous.

We will now turn to several of the more recent German veterinarians. Dieterichs, a great authority in Germany about the middle of this century, at one time performed the operation quite frequently, but seems to have had but little faith in it, and did not recommend it. Falk wrote, in 1831, that he considered it dangerous. Hayne wrote, in 1836, that he had repeatedly performed the operation on sick as well as healthy animals, and expresses himself in favour of it, and considers the existing fears about it groundless.

Forster, of Vienna, states that the operation is indicated in those cases of Flatulent Colic in which a sudden generation of gases takes place, whereby the abdominal parietes are much

distended and the life of the patient endangered. He says that the operation may be performed upon the animal standing or lying, but warns the operator against casting the animal, in consequence of the danger of rupturing the over-distended intestines.

Hertwig, of Berlin, gives quite explicit directions with regard to the operation. He says that, in order to meet the cæcum in its inferior parts, one must make the puncture in the *Regio umbilicalis*, about four inches behind the umbilicus, in the "white line" of the abdomen; or if it is desired to operate on the inferior portions of the colon, the puncture may be made twelve to sixteen inches on either side of the umbilicus, beneath the inferior ends of the four last ribs; or in the *Regio iliaca inferior sinistra* or *dextra*, about eight inches under the angle of the ilium, when the operator may meet the postero-inferior portions of the colon. If, however, he would puncture the antero-inferior portion of the colon at its curvature, the puncture may be made two to four inches posterior to the *cartilago xiphoides;* though the best point is the *Regio iliaca superior dextra*, where the operator is more likely to meet with the basis of the cæcum. Mr. Harthill, and others also, will excuse the writer if he suggests that when practitioners are describing the successful performance of an operation which, from some cause, is in ill repute, they should always be careful to mention the anatomical parts which they expected to touch, and the effects. Such facts are of immense benefit to the young practitioner, and often serve to fix the topographical situation of organs in his mind better than all his studies in his school days. When a veterinarian says he prefers to puncture on the right side rather than the left, it is not sufficient for him to add, because he was more successful thereby. "For anatomical or other reasons?" is the question we desire to have always answered. Without seeking to be obtrusive, the writer would call to the minds of the younger members of the profession, that this very point—the base of the cæcum—is the part most desirable to reach; for not only is the cæcum, anatomically and physiologically, feebly constituted for the quick passage of the digesta through it, and thus, in case of any interference with this act, is favourable to fermentation and generation

of gases; but the ilium here ends and the colon begins. So that we may be fortunate enough to relieve the gas pressure in all three of these intestinal divisions, by one well-directed puncture.

We will terminate these observations by referring to Hering, of Stuttgart—also a very high German authority, who speaks most favourably of the operation, and lays great stress on the *Regio iliaca superior dextra*, as the most suitable point; the base of the cæcum being less likely to be displaced than other portions of the intestines. In fact, we all know that the inferior portion of the cæcum, as well as the colon, is very liable to more or less displacement during all attacks of Colic. It is to be hoped that these observations may be found interesting, if not instructive.

DEATH FROM COMPLICATED DISEASE OF THE HEART AND LUNGS IN A MARE.

BY J. W. HILL, M.R.C.V.S., WOLVERHAMPTON.

On Saturday, the 24th February, I was consulted respecting the loss of an aged brown waggon-mare, under the following circumstances. The owner, Mr. Lees, residing at Derrington, near Stafford, had purchased her the previous day from a dealer in Wolverhampton, and she was taken away the same afternoon. When four miles out, some bran and water was given to her at a roadside house. On proceeding from there, when only a few yards distant, she suddenly and without warning fell down dead.

I found on *post-mortem* examination an extensive longitudinal rupture of the diaphragm, and also of the external (peritoneal and muscular) coats of the stomach, near to the cardiac orifice. The stomach contained the bran she had eaten, and an immense congregation of "bots"; in the intestines were a little green food and hay.

Lungs: very much congested, tuberculous, and a great portion of them emphysematous.

Heart: from its size this at once riveted my attention. When divested of its covering and the clots removed, it weighed a

trifle over thirteen pounds. An examination revealed the following conditions :—

Right auricle and ventricle atrophied, especially the latter which was flabby and in one part almost transparent ; lining membrane of a deep claret colour (endo-carditic), valves black, but normal in structure. Left auricle and ventricle hypertrophied, the latter to an enormous extent ; lining membrane pale and mottled with yellow lymph-like exudation. Mitral valve extensively diseased, being nearly the eighth of an inch in thickness at the margin, of a gritty cartilaginous nature throughout, and with ecchymosis on its free surface. The one flap had a large deeply-inflamed elevated patch near its border, resembling an undeveloped boil.

Conclusions.—Cause of death, Heart Disease. Diaphragm and external coats of the stomach ruptured in the fall, the latter owing to its fulness. The condition of the lungs showed the animal to have been (independent of the heart affection) unfit for great or rapid exertion.

The deficient respiration, and the probable diaphragmatic pressure on the heart and lungs from the distended stomach, combined to bring about speedy dissolution.

A DENTIST FOR A HIPPOPOTAMUS.—A curious feat of dentistry was recently performed at the Aquarium in New York, where a young female hippopotamus was operated upon by Dr. Kohn, her keeper. The animal is rather more than a year and a-half old, and, says the *Scientific American*, is just losing its milk teeth by the growth of the second set of teeth or tusks behind them. The period of teething, it appears, is quite as painful and troublesome with hippopotami as with boys and girls. "Baby," as this interesting young female was familiarly called, was seen to be very uneasy. She was continually rubbing her snout against the bars of her cage or on the floor, and in other ways was evidently seeking to relieve the miserable gnawing of her jaws. The young captive, it appears, is about the size of a tolerably large pig, and had always proved herself so gentle that no serious difficulty was apprehended in the performance of this unpleasant operation. No straps or fetters of any kind appear to have been resorted to. The animal allowed herself to be rolled over on her side, and "only kicked and grunted moderately when, after two or three attempts, a strong pull and a stout twist wrenched forth the offending tusk." Dr. Kohn, adds our contemporary, was induced to draw the tooth, not only to relieve the animal's pain, but also to prevent the possibility of the creature's swallowing it, and thus, perhaps, committing involuntary suicide—a death which animals in a wild state, it is said, not unfrequently meet with.

Editorial.

THE FELLOWSHIP DEGREE OF THE ROYAL COLLEGE OF VETERINARY SURGEONS.

It will be seen from the proceedings of the Royal College of Veterinary Surgeons, reported in another part of the Journal, that one of the most important objects—if not *the* most important—undertaken by the veterinary profession in this country since it was incorporated by Royal Charter in 1844, has been at length carried to a most successful termination. We allude to the Fellowship Degree which the Royal College can now confer by virtue of the powers granted to it in the Supplemental Charter recently obtained, and which it has availed itself of by instituting a body of primary Fellows to carry out the further provisions of this Charter.

The urgent necessity for the creation of this higher degree has long been apparent; but it was not until the Council of the Royal College was impelled by the force of circumstances to move in the matter, that steps were taken to acquire the necessary powers. With commendable energy and devotion—for which, we feel certain, the profession will now, and for centuries to come, give the Council full credit—the serious and laborious task of devising and elaborating such an instrument as we possess in the Supplemental Charter, was entered upon and accomplished in a space of time which now seems marvellously brief, considering what had to be done. Without any secrecy, the least desire or need to resort to duplicity in order to mislead the profession, and also without any blaring of trumpets when it had completed its work, the Council has honestly, openly, and vigorously carried out its resolve to do its utmost for the promotion of those objects which every true student of veterinary medicine, and every one who is intent on promoting its welfare, has at heart.

That difficulties should have been encountered is only what any one who knows our history could have prognosticated; and that they have all been overcome is due to the fact that those who had to contend with them are not to be daunted by opposition—open or covert; animated, as they are, by a sincere and loyal desire to do their duty to the profession, and to afford it every opportunity of improving itself by those means through which improvement can alone be effected.

Nothing is, or has been, more required among us than an *esprit de corps*—a determination to make for our science a position befitting it, and to stimulate and encourage those who are animated by this determination. The Fellowship Degree should do this, if we are only true to ourselves. Hitherto there has been nothing to work for, nothing to aim at, after the diploma of Member had been obtained; so that the meagre rudiments of veterinary science gained at college soon disappeared; or if they were retained, there was but little inducement to add to or develop them while the mind was yet impressionable, and the habit of study had not passed away. The evils of this have been only too apparent for very many years, and they have kept us behind

every European country; whereas, under more auspicious circumstances, we should have been foremost.

It now remains with the profession to amend its position, and we feel confident that this higher degree should, and *will*, do so if it is esteemed among ourselves as it ought to be. It should be a solid guarantee of professional integrity, honour, and ability, and a passport to the highest offices and dignities to which we can lay claim. It must be no mere empty honour, "sown broadcast" by one or two individuals for their own private ends; but a real test and touchstone of worth and fitness, and a token that he who holds it is worthy of consideration and esteem as one who has given proof of his sincerity in the promotion of that which we should all labour to achieve—the perfecting of our science, and consequently the benefiting of the public and ourselves—to say nothing of aiding in the great work of humanity and civilization.

The list of primary Fellows will show that already the effort has been well seconded, and that the honour and value of the degree are in safe hands. The response to the call made upon the senior members of the profession has been hearty and genuine, and augurs well for the future. As the Council and Board of Examiners of the Royal College can only be composed of Fellows, the profession will have a surety that its best interests will be maintained; while the knowledge that these professional honours are only accessible to those who have obtained this degree, should stimulate the junior members to gain it. By it not only will they raise themselves in the estimation of their brethren and the public, but they will also greatly benefit themselves by the observation and study which every candidate must pursue in order to successfully undergo the examination.

Hitherto our earnest students, and those who would have become earnest students, have had no encouragement—nothing to work for, and by which they could be distinguished from those destitute of ambition and ability. Unlike every other profession, we have never sought to encourage labour for the general good, or reward or recognise striving merit. The Fellowship Degree has been devised to remedy this deficiency—at least, to some extent. If it fails to accomplish this, we shall be greatly mistaken, and shall have lost all hope of regeneration. But "failure" is no word of ours, and we know not what it means; else a thousand times and more we must have closed our eyes and clasped our hands in dark despair. We have cheerfully grouped ourselves with those pilgrims who ever travel with their face towards the rising sun, and so always have the shadow of their burden fall behind them.

PROTECTIVE INOCULATION FOR CONTAGIOUS PLEURO-PNEUMONIA.

THE evidence in favour of protective inoculation for this disease is now, it may truly be said, overwhelming. In every part of the world where it has been tried, its value appears to have been amply demonstrated—often even when the operation has been rudely performed by amateurs. The scientific

experimental evidence is also most decisive and interesting, and we purpose referring to it at an early opportunity. We have now only to note that, by a decree of Feb. 10, the Dutch Government has authorised the burgomasters to order the compulsory inoculation of all cattle which have become suspected through cohabitation with diseased ones; the operation to be performed by a qualified veterinary surgeon, and the State to defray the cost—fifty centimes for each animal. If the supply of virus fails, the burgomaster may adjourn the inoculations, on the advice of the district veterinary surgeon, until the latter can procure more, which he must do as speedily as possible. If the owner or guardian of the cattle opposes the inoculation, legal measures are to be taken against him. Suspected cattle which, on the information of the veterinary surgeon, cannot be sufficiently isolated at pasture, shall, with all the precautions indicated by the latter, be moved to stables, and there isolated for the period prescribed by the royal decree of October 30, 1872.

THE CATTLE PLAGUE AND CONTAGIOUS PLEURO-PNEUMONIA IN THE METROPOLIS.

At the weekly meeting of the Metropolitan Board of Works, held on March 9th, it was reported that only one fresh case of Cattle Disease had occurred since the last report, so that, in fact, they had had one week with a clean bill of health. In the last case there were ten cows, three of which were found to be diseased. Since the commencement of the outbreak there had been 13 cases, involving 148 animals, of which 54 were attacked with the disease and 94 were healthy. Of the 54, 13 died and 41 were killed; of the others only one remained alive and 93 had been slaughtered. The whole amount of compensation would not be more than £5 per head for 54 animals. Pleuro-pneumonia was greatly extending among milch cattle; the numbers attacked with it during the first two months of each of the last three years were 38, 81, and 92; this year the number was 133. With a view to obtaining a more thorough control over the sanitary condition of cowsheds in the Metropolis, the Works Committee was requested to consider the desirableness of declaring the business of a cowkeeper to be an offensive business under 37 and 38 Vict., cap. 67, sec. 3.

On March 11th, Cattle Plague was discovered in a dairy at Stepney, and more than 120 milch cows were destroyed.

VETERINARY HONOURS.

At the meeting of the "Association Médicale Vétérinaire" of Antwerp, Belgium, held on March 6th, George Fleming, Royal Engineers, was unanimously elected a Corresponding Member (Foreign) of the Association. We feel certain that British veterinary surgeons will warmly appreciate this compliment from their Belgian colleagues.

PRESENTATION.

On February 9th, a very pleasing ceremony took place within the residence of Professor M'Call. The senior students of the Glasgow Veterinary College presented Mrs. M'Call with a magnificent timepiece, bearing the following inscription:—

"To Mrs. James M'Call, from the Senior Students of the Glasgow Veterinary College, in token of their esteem and regard for her husband, Principal M'Call.—February 9th, 1877."

Mr. M'Queen, in making the presentation, alluded to the sterling qualities and great success of Professor M'Call, not only as a teacher, but also as a practitioner of veterinary medicine, and his assiduous endeavours to impart instruction to his pupils. He also, on behalf of his fellow-students, bore testimony to the invariable kindness of Mrs. M'Call, and expressed the desire that the future of herself and husband might be long, happy, and prosperous.

Principal M'Call, replying for his wife, thanked the students for their gift, and said that he felt very proud indeed of the presentation, and especially on the grounds which it was made to Mrs. M'Call—*viz.*, as representing his "better half"; for all who knew Mrs. M'Call must admit the truth of that statement. The Professor then referred to the changes which had taken place in veterinary teaching since he had had the honour of being connected with the profession as a teacher; of the great difficulties which lay in the way of students gaining an entrance into the profession; of the brighter prospects, social and pecuniary, which he distinctly observed looming in the distance; and, in conclusion, thanked the students for the unvarying kindness and attention they had (in common with all the students he had ever taught) shown to him at all times and under all circumstances.

Abstract of the Proceedings of the Royal College of Veterinary Surgeons, Veterinary Medical Societies, etc.

ROYAL COLLEGE OF VETERINARY SURGEONS.

SPECIAL MEETING OF COUNCIL, HELD FEBRUARY 20TH, 1877.

Present—Col. Sir Frederick Fitzwygram, Bart., President, in the chair; Messrs. Balls, Batt, Cartledge, Cartwright, Collins, Dray, Duguid, Fleming, Greaves, Harpley, Hunt, Moon, Moore, Withers, and the Secretary.

The notice was read convening the meeting.

The minutes of the two preceding meetings were read and approved.

Correspondence.

Letters were received from Professors Williams and Walley, Messrs. J. R. Cox, Gowing, and Naylor, regretting their inability to attend the meeting.

A letter from Professor Walley, acknowledging receipt of letter informing him that the present system of examination would cease at Christmas, 1878.

A letter from Mr. Robertson, of Kelso, highly approving of the amalgamation of the veterinary portion of the Court of Examiners, and stating that, if appointed, he would willingly act on both sections. Also another letter from him, acknowledging with thanks the honour of his election as a Member of the Court of Examiners in England.

A letter from Mr. Frank Burnham, of Preston, near Hull, who holds a university degree, asking for certain information as to obtaining the necessary qualification of a veterinary surgeon.

The Secretary stated that the President had furnished the required information, and had enclosed a copy of the examination scheme.

Letter from Mr. Alfred J. Owles, Dublin, enclosing extracts from the *Irish Times* of a person described as a veterinary surgeon, and requesting that, if he were not a member of the profession, the subject should be brought under the notice of the editor of the paper, as well as the Council of the Royal College of Veterinary Surgeons.

The following disclaimer appeared in response to the Secretary's communication to the *Irish Times*:—

"DISCLAIMER.—The Registrar of the Royal College of Veterinary Surgeons, London, begs to state that Thomas Moultry, styling himself a veterinary surgeon, who was brought up before a magistrate on a charge of being drunk and stealing a horse, the particulars of which appeared in the *Irish Times* of February 15th and 16th, is not a member of the Royal College of Veterinary Surgeons."

A letter was received from Mr. J. R. Heron, solicitor, stating that the judges appointed by the Court of the Farriers' Company to act with those appointed by the Council of the Royal College of Veterinary Surgeons, were Messrs. W. H. Wagstaff, of 9, Bartlett's Buildings, Holborn; Mr. Sidney Smith, 1, Furnival's Inn; and Mr. Wm. Field, of 224, Oxford Street. He stated that there were only four competitors for the first prize, and none for the second and third. He also enclosed copies of the regulations,* and promised to forward the essays to the judges in the course of a few days.

The judges appointed by the Council of the Royal College of Veterinary Surgeons were Messrs. Fleming, Cox, and Batt.

A letter had been received from Mr. Jenkins, Secretary to the Royal Agricultural Society, enclosing another from Mr. Hunt, and stating that the report for the Royal Agricultural Society's prizes was highly satisfactory to the Council; that the money prizes had been sent to the three gentlemen, and that the medals to which they were entitled had been placed in hand. The fees and expenses had been sent to the examiners.

At the suggestion of Mr. Harpley, Mr. Jenkins' letter and Mr. Hunt's replies were read.

Mr. HARPLEY said he wished to make a few remarks on the subject. The Council had selected three of the very best examiners, who very ably had performed their duties. He thought that an error had crept into the matter, which he did not wish repeated in future. Three examiners had been appointed by the Council, and, as a matter of course, it would be supposed that a report would have been forwarded, together with any remarks the Council wished to make upon the matter. This had not been done, and, considering this was the first time such examinations had occurred, he thought some comment should have been made upon them. The report sent to the Royal Agricultural Society was a very meagre one. He also took exception to the fixing of the day for the examinations, and to the large amount of the fees paid. He concluded by moving "That the examiners engaged in the annual examination of veterinary surgeons for the Royal Agricultural Society's prizes, be requested to send in a written report of the examinations to the Secretary of the Royal College of Veterinary Surgeons as soon after they have been held as possible. That the Council of the Royal College of Veterinary Surgeons fix the amount of fees for the examinations."

Mr. HUNT, in seconding the motion, explained the reason why such a course had been adopted. He said he was most anxious that the Royal College of Veterinary Surgeons and the Royal Agricultural Society should go hand-in-hand; but he thought that the Royal College of Veterinary Surgeons had not placed sufficiently explicit instructions in the hands of the examiners. The representatives of the two bodies had communed together

* These appeared in the *Veterinary Journal* for January, p. 47.

at the end of the examination, and were at a loss to know when, where, and how the report was to be sent in. The examiners had sent in the best report they could to the Royal Agricultural Society, and it was forwarded by the same night's post.

Mr. HARPLEY said he would leave it to the President and Council to say whether anything particularly wrong had been done.

The PRESIDENT thought that there was no question that the Royal Agricultural Society were annoyed at the charge that had been made. Thirty-five guineas was a large charge for five students. He believed there was no intention on the part of any one to do wrong, but it was an unfortunate occurrence, and had produced a certain amount of feeling on the part of the Royal Agricultural Society. He thought the matter might well be allowed to drop.

The resolution moved by Mr. Harpley was then put and carried.

A letter was read from Mr. W. Cockburn, asking to be informed when the competitive examination for the Fellowship would be held for those who had been five years in practice, whether it was to be a written or oral examination, or both, and where it was to be held.

The Secretary was directed, in reply, to refer Mr. Cockburn to the rules.

A committee, consisting of Messrs. Collins, Fleming, Harpley, and Duguid, were appointed to draw up rules for the guidance of the examiners for the degree of Fellowship by examination.

The case of Mr. Payne.

This case, which was brought up at the last meeting, was again under consideration. It was decided that Mr. Payne should be informed that his son was not eligible.

Examinations of the Royal College of Veterinary Surgeons.

The SECRETARY stated that he had written to the Principal of the Royal Veterinary College, asking if Monday, the 2nd of April, would be a convenient day for the examinations to commence, but he had received no reply.

On the motion of the CHAIRMAN, it was ultimately agreed that the examinations take place on Monday, the 2nd of April, and that the Scotch examinations be held in April, so as to suit the convenience of the examiners and principals of the schools.

Expenses of Examiners.

Mr. CARTLEDGE called attention to the railway expenses of those examiners who might be called upon to go to Scotland from England, or *vice versâ*.

Mr. GREAVES said he was always in favour of husbanding the resources of the College, and he wished to remind the Council that at one time Professor Dick had had examiners to examine on his board without charge. They made no charge for either examination or railway fare; but the arrangements for the examinations had now been altered, and to meet the case he would move "That an examiner be allowed his railway expenses, if he travels more than 150 miles from home to the place of examination."

Mr. HUNT seconded the motion, which was carried.

Fellowship Committee.

The Council then proceeded to consider some additional names proposed as first Fellows under the Charter.

Mr. GREAVES called attention to the fact that there were several members who were really and truly good men, and a credit to the profession, who happened to be five or six weeks short of the time allowed by the Charter, and he would be glad to see his way to electing them.

Mr. HARPLEY, while anxious to advance Mr. Greaves' views, called attention to the fact that the Council, under the Charter, had no power to do what was suggested.

The Council took into consideration the following list of members proposed for Fellows :—

Field, William, President R.C.V.S. 1854 and 1855, Member of Council 1844 to 1864, Examiner 1844 to 1863 ; Gloag, John W., Staff V.S. ; Naylor, Martin F., President Yorkshire V.M.S. 1869 ; Lyon, William, Examiner 1844 to 1850 ; Stewart, John, Original Research ; Withers, Samuel H., Member of Council R.C.V.S. 1849 to 1873 ; Freeman, James, President Yorkshire V.M.S. ; Mayer, Thomas W., Member of Council R.C.V.S. 1844, Examiner 1851 to 1856, 1873 to 1876, Professor Cirencester Agricultural College ; Cockburn, William, Examiner R.C.V.S. 1856 to 1870 ; Raddall, Warne, President West of England V.M.S. 1865 ; Ferguson, Hugh, Professor, H.M.V.S. in Ireland Veterinary Department Privy Council ; Smith, William, President Eastern Counties V.M.S. 1868 ; Moon, James, Member of Council R.C.V.S. 1860 to 1876 ; Howell, James, President Lancashire V.M.S. 1867 ; Paterson, Robert B., Examiner R.C.V.S. 1870 to 1876 ; Cartwright, W. A., Original Research ; Gresswell, Dan, Original Research ; Greaves, Thomas, President R.C.V.S. 1869, Member of Council 1864 to 1876, President Lancashire V.M.S. 1864, Yorkshire V.M.S. 1867, Liverpool V.M.S. 1869, and Midland Counties V.M.S. 1874 ; Broad, Thomas D., President West of England V.M.S. 1869, Member of Council R.C.V.S. 1861 to 1874 ; Gardiner, B. C. R., Staff V.S. ; Hunt, Robert L., President R.C.V.S. 1864, Member of Council 1868 to 1872, Examiner 1872 ; Taylor, Peter, President Lancashire V.M.S. 1865 ; Lepper, George A., Vice-President R.C.V.S. 1867, 1875 ; Cartwright Henry Josh., Vice-President R.C.V.S. 1868, 1874, 1876 ; Broad, James C., Member of Council R.C.V.S. 1867 to 1876 ; Gregory, Thomas D., President West of England V.M.S. 1868 ; Collins, F. F., Staff V.S. ; Gowing, Thomas W., Member of Council 1854 to 1857 and 1868 to 1874, President Central V.M.S. 1875 ; Carter, Joseph S., President Yorkshire V.M.S. 1873 ; Whittle, W., President Lancashire V.M.S. 1871 ; Owles, Alfred J., Staff V.S. ; Cartledge, B., President R.C.V.S. 1871, Member of Council 1859 to 1874, Examiner 1859 to 1876 ; Cuthbert, John, President Yorkshire V.M.S. 1872 ; Robinson, Alexander, Examiner R.C.V.S. 1870 to 1876 ; Cox, John Roalfe, President Central V.M.S. 1874 ; Blakeway, Francis, President Midland Counties V.M.S. 1871 to 1873 ; Gudgin, T. P., Staff V.S. ; Hunting, Charles, Member of Council R.C.V.S. 1866 to 1870, President North of England V.M.S. 1864, Author ; Steel, Charles, 12th Lancers ; Bath, Henry, Royal Artillery ; Robertson, William, Examiner R.C.V.S. 1860 to 1876, President Scottish Metropolitan V.M.S. 1871 ; Collins, James, P.V.S., Member of Council R.C.V.S. ; Poyser, George, Original Research ; Kettle, Bampfield, Original Research ; Harpley, M. J., Royal Horse Guards, President R.C.V.S. 1872, Member of Council 1865, Examiner 1873 ; Fitzwygram, Col. Sir F., Bart., President R.C.V.S. 1875 and 1876, Author ; Woods, William, President Liverpool V.M.S. 1876 ; Death, William, Staff V.S. ; Mitchell, Graham, Original Research ; Fleming, G., Royal Engineers, President C.V.M.S. 1872 and 1873, Member of Council R.C.V.S. 1868, Vice-President 1867, Examiner 1872, Author ; Lowe, Clement, Vice-President R.C.V.S. 1870, 1871, 1872, 1873 ; Lambert, James, 17th Lancers ; Broughton, William, President Yorkshire V.M.S. 1874 ; Morgan, George, President Lancashire V.M.S. and Liverpool V.M.S. 1875 ; Heyes, Gilbert, President Liverpool V.M.S. 1868 ; Stephenson,

Clement, President North of England V.M.S. ; McCall, James, Professor Veterinary College, Glasgow ; Williams, W., Professor and Author ; Law, James, Professor of Cornell University, Author ; Williams, George, V.S. to Her Majesty ; Lambert, T. D., V.S. Royal Agricultural Society of Ireland ; Welsby, Joseph H., Original Research ; Lupton, James J., Author ; Taylor, Thomas, President Lancashire V.M.S. 1868 ; Oliphant, George A., Coleman Prize : McEachran, D., Professor Veterinary College, Montreal ; Anderton, John W., President Yorkshire V.M.S. 1875.

The following names were selected by the Irish section of the committee :

King, James, Belfast, Original Research ; Simcocks, Thomas, Drogheda, Original Research ; Murphy, Matthew, Dublin, Original Research ; Paley, David, Dublin, Original Research ; Preston, James, Mallow, Original Research ; Bell, John, Clonmel, Original Research.

On the ballot being taken,

The PRESIDENT declared seventy-two primary Fellows duly elected.

The following additional names were then proposed by the Council, viz. :—

Varnell, George, late Professor R.V.C., President R.C.V.S. 1865, Member of Council 1852 to 1868 ; Balls, George, Member of Council 1871 and 1875 ; Batt, Hartley T., Member of Council 1876, Original Research ; Coates, Wm. Henry, Member of Council 1862 to 1874.

On the ballot being taken, these gentlemen were also declared to be elected.

Total number of Fellows elected, seventy-seven.*

A copy of the new form of diploma was submitted. It was approved of and ordered to be engraved, and 100 copies to be printed.

The Examination in Pharmacy.

The following is the report of the Committee on the removal of Pharmacy from Clause 6 to Clause 8 in the Education Scheme :—

A meeting of the Committee appointed by the Council to take into consideration the transference of "Pharmacy" from Clause 6 to Clause 8 in the Education Scheme was held on February 16th.

The Committee are of opinion that, as the schools have for this year arranged their classes to suit the new examinations, it would be undesirable, and indeed impossible, to make any change at present.

The Committee recommend that if the new and as yet untried scheme is found unsuitable at the end of the year, the subject should then be reconsidered, and if any change be thought desirable, due notice could be given to the schools.

The report was adopted.

This terminated the business of the first special meeting, at the conclusion of which a

SECOND SPECIAL MEETING

was held.

The PRESIDENT moved, and Mr. MOORE seconded, the confirmation of the Bye-laws which were moved at the last meeting of the Council.

The motion was carried, and the new Bye-laws were duly confirmed in accordance with the provisions of the Charter.

The PRESIDENT explained that the new Council, after its election in May, would have the opportunity of making any further alterations they might think necessary.

The proceedings then terminated.

* Messrs. Matthew Hedley and William Dewar accepted the degree of Fellowship, but sent in their names too late for the general election. Their application will be considered by the Council at its next meeting.

Alteration of the Bye-laws.

The following are the alterations, transpositions, omissions in, and additions to, the Bye-laws of the Royal College of Veterinary Surgeons. Copy suspended in the Council Room, September 20th, 1876. Adopted at a Special Meeting of Council held February 6th, 1877.

3. Any members of the College who may be desirous of having the names of any persons they may propose as members of the Council included in the list after mentioned, must give notice thereof, in writing, to the secretary at least twenty-one days prior to the Annual General Meeting.

4. Fifteen days prior to the Annual General Meeting, held on the first Monday in the month of May, the secretary shall prepare a list, stating the names and residences of the persons proposed, with the names of their proposers, and also of the members of Council who remain in office, as well as those who retire by rotation, with any vacancies arising from deaths, resignations, or other causes; and he shall within three days send a copy of such list to the registered address of every member whose residence exceeds a distance of five miles from the place at which the Annual General Meeting is held. All such voting papers must be returned to the secretary seven clear days prior to the day on which the election is to take place.

5. Every person on voting must erase the names of all candidates for whom he does not intend to vote. If more names are left in than there are vacancies in the Council, the paper will be rejected.

6. Voting papers can only be used by members whose residences are more than five miles distant from the place at which the Annual General Meeting is held.

7. Previous to the commencement of election of members of Council, the members of the body corporate assembled at the General Meeting shall choose from among themselves not less than six persons to act as scrutineers.

11. After the minutes have been read and signed, any correspondence and also reports from committees shall be read, and then the accounts and business connected with the property of the body corporate shall be considered; and the general business shall be proceeded with.

20. The Council shall also annually elect some fit and proper person to act as Registrar of the College.

22. Each examiner shall be elected for five years only, but be eligible for re-election; but any Examiner may be removed by the vote of two-thirds of the members present at any meeting of the Council, to be confirmed by a special meeting called for the purpose.

24. Each section of the Court of Examiners shall have a chairman and a secretary. The chairman of each division of the Court shall be elected by and from amongst its members. The secretaries shall be appointed by the Council.

26. Examinations shall be held in each year at such times as the Council may appoint.

29. No candidate shall be eligible for any examination unless a certificate of his qualification be signed by the principal of the college at which he has been educated, and transmitted by the principal to the secretary of the Royal College of Veterinary Surgeons acting for England, or to the secretary acting for Scotland, not less than seven days prior to such examination.

30. No candidate shall be eligible for any examination unless the examination fee be paid at least seven days prior to such examination.

35. In case of rejection the Board of Examiners shall report to the Council what further period of study ought to be required of a student before he is allowed to present himself for re-examination.

44. A list of the successful candidates, at each examination, signed by the chairman of the Court, shall be transmitted to the President, who shall, on receipt thereof, as applying to the first and second examination, order the candidate's name to be registered; and as applying to the third examination, shall grant the diploma of the College to the candidate on payment of the fee for registration.

47. A student holding a diploma from any medical examining body recognised by law shall be exempt from attendance on the first year's course of lectures, and from the examination at the end of that year. A student holding a foreign or colonial veterinary diploma from any veterinary examining body recognised by the Council of the Royal College of Veterinary Surgeons, shall be admitted to the first and second years' examination without attendance on lectures—provided such course of instruction, foreign and colonial, has been not less than two years.

49. At least once in each year, at such time as may be appointed, the Council shall appoint a Special Court of Examiners for the purpose of examining candidates applying for the degree of Fellow. But no examination shall take place unless there are at least four candidates. This Special Court shall consist of not less than three members.

50. Each candidate other than a professor or ex-professor at a school affiliated with the Royal College of Veterinary Surgeons, will be required to produce a certificate of graduation in arts at a university to be recognised for this purpose by the Council, or a certificate of liberal education after an examination by the College of Preceptors under the direction and supervision of the Council.

51. The subjects for the examination in the degree of Fellow shall be fixed from time to time by the Council.

52. The fee on admission to the degree of Fellow shall be £15 15*s*. Prior to his admission for examination the candidate is required to pay a fee of five guineas, to be allowed on the fee for the degree of Fellow, but to be retained in case of rejection, and a further fee of £10 10*s*. on admission to the degree of Fellow.

53. The priority of Fellows whose diplomas bear the same date shall be determined at each examination by their place in the list sent in by the Court of Examiners.

YORKSHIRE VETERINARY MEDICAL SOCIETY.*

THE annual meeting in connection with this Society was held at the Queen's Hotel, Leeds, on Friday, Feb. 2nd. The President of the Society, Professor Williams, of the New Veterinary College, Edinburgh, occupied the chair, and amongst those present were Sir F. Fitzwygram, Bart.; J. Leather, Liverpool; H. J. Cartwright, Wolverhampton; C. Stephenson, Newcastle; J. Gerrard, Market Deeping; P. Taylor, Tom Taylor, W. A. Taylor, T. Hopkin, W. Dacre, A. Lawson, E. Faulkner, Manchester; Ross, Scots Greys; Poyser, Carabineers; Whitfield, Army; Atcherley, Harrogate; Lodge, Dewsbury; Newby and Brigg, Bradford; Captain Hayes, and Dr. Percivall; Messrs. T. Greaves, J. W. Anderton, J. S. Carter, R. W. Murdoch, W. G. Schofield, D. Spillman, J. Cuthbert, J. H. Ferguson, Geo. Carter, J. E. Scriven, J. L. Faulkner, J. M. Axe, T. Pratt, Peter Walker, Parlan Walker, Jas. Freeman, Josh. Freeman, W. Edmundson, C. Patterson, M. E. Naylor, W. Broughton, and four or five other names the Secretary did not obtain.

* This report was received too late for publication in last month's *Veterinary Journal*. The delay is not, however, attributable to the Secretary of the Society.

Apologies for non-attendance were received from Messrs. C. Secker, Jno. Faulkner, Fryer, Fallding, Ball, Jno. Schofield, and Jno. Freeman.

A resolution expressing the sympathy of the meeting with the bereaved families of Mr. W. Field, jun., and Mr. D. McLean, was passed unanimously.

Messrs. J. Atcherly, Harrogate, and W. Lodge, Dewsbury, were nominated for membership.

Before delivering his inaugural address, the Chairman detailed a few of of the symptoms of Epizoötic Cellulitis, which he said was very prevalent in Edinburgh just now. It was a form of disease which he had seen thirteen years ago in Yorkshire, but which he had not met with to any great extent during the interim. It was marked by great pain in the limbs; the whole body became exceedingly rigid, and the animal was very lame, standing upon one foot and then upon the other. In some cases which he had tried the temperature was as high as 106°, and in one case it was 108°. That was the highest temperature recorded. As a rule it was about 104 degrees Fahr. In some cases the limbs swelled very early; in others it was prolonged for four or five days. In one case that came under his notice there was great swelling of the head, and in another, the only fatal one out of 150 in ten days, there were ecchymosed spots upon the tongue. There was no cough, or rather it was the exception. If he remembered rightly, they all coughed in the Influenza of thirteen years ago. The prostration of strength from the commencement was very great indeed. In the course of a few hours the horse became almost entirely incapable, and even in those cases where pain in the limbs seemed to be absent the same marked prostration of strength was found. It rolled about from side to side, and the appetite was lost. He remembered very distinctly that when this disease was prevalent before, a simple dose of physic got the animal ailing from it well again. What got it through thirteen years ago seemed to get it through now. To move the bowels slightly seemed to clear the system of a lot of deleterious matter. In some cases where he had administered an aperient the animal was so exceedingly feeble that he almost hesitated whether to administer any medicine at all. Where there was a feeble circulation the tendency of the blood was to coagulate within the cavities of the heart and then to cause death. That, at least, was his experience in Bradford thirteen years ago, and what had led him to adopt the line of treatment which he had, and which had proved so far very successful. When the pain was very great, considerable relief was given to the limbs by fomentation with hot water, and by careful nursing and keeping warm. After dwelling on the fact that one of the causes of this disease seemed to be the saturated condition of the earth after a long wet, the Professor said he would be glad to hear any remarks from the members present on this disease.

Mr. GREAVES said the subject the President had brought before them was a very interesting one. In Manchester they had always Influenza more or less, and in all cases he found a tendency to constipation of the bowels. In their highly sensitive condition a small aperient would purge, and purge more than was desirable. He was in favour of carbonate of ammonia and cold water. Where the prostration was very great a small dose of whisky should be given.

The PRESIDENT then delivered his inaugural address, which was as follows:—

"Gentlemen,—Allow me to thank you for the kind manner in which you have elected me your President for the current year.

"I frankly confess that the presidentship of this Society is an honour to which I have long aspired, having been intimately associated with its founda-

tion, and taken a warm interest in its progress from its earliest days until the present time.

"It is now some fourteen years since a few of us met together in this town to consider what steps should be taken to organize a Veterinary Medical Society for Yorkshire; and from that period until my departure for Edinburgh in 1867 I had the honour and privilege of holding the office of your Secretary, and I shall never forget the pleasure which I felt when in 1866 you recognised my services by the presentation of a microscope,—an instrument which has proved of great service to me in many important and interesting investigations. During the period of my secretaryship I had the pleasure of more or less intimately knowing almost every member of the Society, and of holding much enjoyable intercourse with them. These days are, and ever will be, green in my memory, for they were unassociated with those cares and anxieties inseparable from the position of teacher, with its responsibilities and annoyances.

"Many of you will know that I never had any great desire to occupy a professor's chair, and that the fact of my leaving Bradford to become a teacher in Edinburgh was due to a course of events to which I need not refer, further than to state that the change was not of my own seeking, but was forced upon me almost against my will, for I was both happy and prosperous in Bradford.

"But although my acceptance of a professor's chair was not so gratifying as it would have been had I really aspired and been anxious for it, I honestly acknowledge, notwithstanding the unexpected difficulties, annoyances, and oppositions against which I have had to contend, that I do not regret having become a teacher, for by so doing I have had many opportunities of obtaining varied information, and of contributing some little towards the advancement of my profession. I feel quite sure that the course I have pursued has commended itself to you, and that you have manifested your approval of it by electing me your President.

"I am delighted to see so many old friends and familiar faces here to-day, but I miss some who took an active part in the organization of the Society, and who have since been removed from this world of care: the fruits of their efforts in the interest of the Society will live long. I refer to Messrs. McTaggart, Nicholson, Lord, Kay, Horne, and Taylor, all of whom assisted us at our beginning, and contributed more or less towards our success.

"The prosperity and increasing influence of this Society must be very gratifying to every one of its members, but more particularly to those who were interested in its foundation: it is very true that the movement for its formation received the support of the majority of the veterinary surgeons of Yorkshire, and much warm sympathy from those of Lancashire; but being the first society of the kind in England which published a record of its meetings, it was subjected to some hostile criticism—some opponents going so far as to say that it was established for the purpose of gratifying personal vanities, and that its life would consequently be short. There was another difficulty with which it had to contend, and one that might have led to very serious consequences, not only to the Society, but to the profession: this difficulty was only advanced by one gentleman, but he objected *ab initio* to have anything to do with the Society for the reason that it was not confined to members of the Royal College of Veterinary Surgeons,—that, in fact, its portals were opened to gentlemen holding the veterinary certificates of the Highland and Agricultural Society of Scotland. At this distance of time, when the Society has, as it were, lived down opposition, I state with great satisfaction that the admission by this Society of those holding the Scotch certificate has done more towards the advancement of the profession and the success of the Society than any other clause in its constitution. What would

have been the result if these gentlemen had been excluded, and if this exclusion had been followed by the societies afterwards established? Why, instead of having, as we now have, a profession which is becoming more and more united, and in consequence of this union has been enabled to assert its independence and overcome influences which had too long exercised their baneful effects, we should have had a continuance of two opposing interests, in fact two factions, more numerous now than then, and the profession would have been further divided than it was even twenty years ago,—that is to say, if any of it were left except those proportions which remained after the fight of the Kilkenny cats.

"Our Society having, by wise and liberal measures, secured its prosperity in the past, will, I am sure, continue a similar policy in the future, always bearing in mind that the success of societies depends upon a recognition of the great fundamental principle that societies, as well as living beings, consist of mutually dependent parts; and that whenever this principle is forgotten, and societies made subservient to the purposes of a party, or the personal ambition of any individual member rather than to the general good, such have ignobly sunk out of sight.

"Being expected, as announced by circular, to address you on a given subject (namely, "Do Contagious Diseases originate Spontaneously?"*), I will not detain you by entering into the politics of the profession, or the details of those changes which have taken place within the last year or so, further than to state that these matters have had the careful and earnest consideration of those who have the interest of the profession truly at heart, and to predict that if the history of our profession be ever written, the record of what was done in 1876 will form one of the most important parts of the book.

"Gentlemen, I cannot proceed to my subject without referring to the great loss which we have so recently sustained by the deaths of two of the Examiners—both young men in their very prime, and with every prospect before them of a long continuance of health and usefulness. I refer to Mr. W. Field, jun., of London, and Mr. Maclean, of Glasgow; and I feel sure that you will all accord your sincere sympathy with those to whom their loss is irreparable."

A discussion followed the reading of the address, and was taken part in by Mr. Stephenson, Mr. Naylor, Mr. Freeman, and Mr. Gerrard, all of whom expressed themselves in favour of the view taken by the President respecting the spontaneous origin of contagious disease.

Sir Frederick FITZWYGRAM said: "The President started with some observations on the origin of contagion; and on that subject alone I wish to make a few remarks, because it is a favourite subject of mine. I hold it to be quite impossible to discuss this subject in detail. It is always open for an opponent to say that the agencies which produced disease are so subtle that they may occur. I think the only light in which we can look upon this subject is a broad and general one. It is impossible to conceive that the generation of disease can be otherwise than spontaneous, unless we believe that Providence in the commencement of all things created each specific disease. If we do not believe these specific diseases were so created, it follows that the cause which originated them centuries ago can produce them again in the present time. I do not see, myself, very much use in going any further than that, nor do I see that we can avoid the belief that they may be originated spontaneously even in the nineteenth century." The hon. baronet then moved a vote of thanks to the President, remarking that no man in the present century had done more for veterinary science than Professor Williams.

* This address is published at the commencement of the Journal.

Mr. P. TAYLOR seconded the motion, which was unanimously carried.

The PRESIDENT briefly replied.

In the evening there was a dinner, at which Professor Williams presided. After the usual loyal and patriotic toasts,

Mr. BROUGHTON (Leeds) proposed the toast of the evening—"The Royal College of Veterinary Surgeons." After speaking of the necessity of higher education, and noting with pleasure the institution of preliminary examinations, he said the Council had been engaged lately in considering the clauses of a Supplementary Charter—a measure which would confer upon the profession very great and new political privileges. He took the present opportunity of thanking Sir Frederick Fitzwygram and other members of the Council for their very great labours in bringing this matter to a conclusion. There was also another matter which the Council had instituted, and that was a degree in veterinary medicine and surgery. From this time forward they would have both members of the Royal College of Veterinary Surgeons and Fellows; but whether the Fellows would be able to walk into the stables, charge a guinea, and give advice, he did not know. The measure, however, would no doubt stimulate the veterinary surgeon to keep up and improve the scientific knowledge which he had derived at the hands of his teachers. Proceeding to speak of the gallant President of the College, Mr. Broughton said Sir Frederick Fitzwygram was one of them purely and solely from his love of the profession, and he thanked him for the exertions he had made to advance its status. He was sure they would all agree with him in saying they gave Sir Frederick a cordial welcome to Yorkshire.

The toast was drunk with musical honours.

Sir Frederick FITZWYGRAM, in responding, said: "Mr. President and gentlemen, I thank you for the marked kindness with which you have received the toast of the Royal College of Veterinary Surgeons, and also the name of your humble servant along with that toast. It is a great pleasure to me to be here to-night, and to see so numerous a gathering of Yorkshire veterinary surgeons at this conference. I wish I had the opportunity and time to go the round of the other veterinary associations, for I consider that almost a duty on the part of any one in my position. Well, I congratulate you upon the success of this meeting. I believe that these meetings are of the greatest possible advantage to the veterinary profession, both on account of the papers which are read at them and which are extremely valuable in themselves, and on account of the feeling of friendship which they promote amongst the members of the profession. But standing here as the representative of the Royal College of Veterinary Surgeons, I think you will probably expect to hear from me something of the proceedings of the Council during the year which is now drawing to a close. During the year, gentlemen, we have endeavoured to obtain a new Charter. In that Charter we ask for some four principal and several subsidiary objects. The first and greatest of these objects is that the Council shall be elected by the votes of the profession, and not by the annual general meeting of those who might live in the neighbourhood of the meeting or be able to attend it. By transferring the election of the Council to the profession at large, we shall excite amongst you all a warmer interest in our proceedings. And allow me to say that whilst we have transferred the election from London to the profession at large, I think the Council are entitled to a certain amount of credit for having kicked down the prop which supported them in their places. The second object of the Charter is the creation of a higher diploma. The sister profession has long enjoyed the advantage of a higher diploma. It has been found to stimulate the young men after they leave the schools to go on and progress in their education; and it has also the advantage that those outside the profession, when they employ one who has passed that second and severer

examination, have the certainty that they are employing well qualified, practical men. The third object we had in view was to be able to hold the annual general meeting in Scotland or Ireland. It was felt that Scotland and Ireland were to a certain degree, by the previous constitution of the Charter, left out of the ship; and in my opinion the national Scottish feeling in favour of the Highland and Agricultural Society has been mainly due to the fact that our head-quarters are in London. I think that feeling is an evil to the profession. I believe that by the salutary measure of holding—perhaps once in three years—our annual meeting in Scotland, we shall be able to soften down that feeling; and I have no doubt that before long the Highland and Agricultural Society will see the advantage of placing their diploma, or rather their certificate, in the hands of the Royal College. There was a fourth object which we had in the Royal Charter, which was known as Clause 13. That was a clause which we introduced into the Charter to give protection to veterinary surgeons against unqualified men. I believe the Council sincerely desired to carry that clause; and the profession at large were exceedingly desirous that that clause should be carried. But on submitting it to the legal adviser of the Council, he told us that no Charter granted by the Crown could confer that power in any way. The Queen is the source of all honour; she can bestow rights and privileges, but she cannot in this country—this free country—impose a penalty on any British subject. A penalty on a British subject, I am thankful to say, can only be imposed by the consent of the Queen, Lords, and Commons. In consequence of that we withdrew the clause. I believe that there is a strong feeling against the Council because they withdrew that clause; but inasmuch as the body to whom they applied—the Privy Council and the Crown—had not the power to grant it, I think you will agree with me that that feeling is wholly undeserved. As I have said, the Council are very anxious, I am very anxious, and I know the profession is very anxious, to obtain that protection; and, as far as my vote and influence goes, I shall be very happy to assist in getting it. But I do not believe much in protective legislature: I do not believe that in this country protective legislation acts very far. I believe the best qualified veterinary surgeons do not demand this protective measure. With regard to those who do not command the confidence of their customers, I very much doubt if they would receive any very much greater amount of confidence if this Act were passed. I am perfectly willing to assist in trying to get this clause, but I do not believe the profession will find it to be all that they expect. In the sister profession they have got such a clause as the one we wish to get; but in the sister profession there are seventeen or eighteen licensing bodies, and each of these has the power to grant licenses to practise. The principal clause which is found in the sister profession is that which created a general register. But that general register we have already. It was considered a very great advantage that any person could find out at once, by means of this general register, whether a person was or was not a qualified man. Well, in regard to veterinary surgeons, as we have only one examining body, we have that register ourselves, and anybody can ascertain at once whether a person calling himself a veterinary surgeon is really qualified or not. The second question that has been before the Council this year has been the application of the Highland and Agricultural Society for power to grant diplomas. I think that in this matter that Society did not behave in a very handsome way towards us. When we applied for our new Charter, we wrote a note to the Secretary, sent him a copy of the proposed Charter, and explained the whole matter to him, and asked if he had any objections to what we did. But when the Highland and Agricultural Society applied to the Privy Council for a Charter, they kept the matter perfectly secret. We never heard a word about it from them, and only found out through a short notice in a Scotch news-

paper that they had applied for a Charter. On making inquiries, we found it was necessary to resist it at once. We asked for an interview with the Duke of Richmond, and laid before him our objections to the Charter. He appeared to be impressed with what we said, and asked us to state in writing the objections which we had against the Charter. Subsequently they were reduced to writing, and I dare say you have all read them. I honestly confess that I troubled myself no more about the matter, because I felt the Charter would not be granted; and it has not yet been granted. The question is now settled for a certain number of years, because it is the custom of offices like the Privy Council, when an application has once been refused, not to listen to a fresh application until new reasons can be given, or until after a lapse of ten or twenty years. I may say this: that if the Highland and Agricultural Society were unable to obtain a Charter from the Privy Council, even though the great Scotch nobleman the Duke of Richmond, who has been president of the Society, is at the head of the Privy Council, I do not think there is any likelihood in the world of their ever getting it. I regard the diploma given to the Highland and Agricultural Society as a very great evil. It breaks up the unity of the profession. I was in hopes that when the Charter was refused the Highland and Agricultural Society would have had the good sense to give up their examination; but I see that they have determined not to do so. One of the subjects which has occupied the Council has been the increased period of study. You are aware that many years ago, when veterinary science was first studied, a single year was considered sufficient to qualify a man. The period was then raised to a year and a half, where it rested some time. The next great change made was the introducing of two examinations instead of one. Now the period of study has been extended to three years. The objection to that increase was that veterinary surgery students could not afford the extra expense of the fees, and, secondly, that they could not afford to be so long out of remunerative employment. We find, however, that there are now entering our schools a class of students who can afford to pay for a three years' tuition, and that being the case, we had no hesitation in deciding upon the three years being adopted as the period of study. It is proposed that the first two years should be devoted to what I may call school-learning, and the third should be given up to the study of pathology, instruction in diseases, and practical knowledge. The great complaint which has hitherto been made against veterinary surgeons is that, although they may have science, they have not practical knowledge—at least when they come up for examination at the College. At these examinations some of the simplest practical questions are asked of students, and I am sorry to say that they are sometimes unable to give an answer. I am not, therefore, surprised if people outside the profession choose to employ unqualified men in preference to thoroughly qualified men who lack, however, practical knowledge. Not long ago a young man in the profession was asked the age of a horse. He replied it was about eight years, or it might be more. He had not the slightest idea how old the horse was. The other subjects which the Council have been considering are also worthy of mention. One of these is the amalgamation of the Scotch and London Boards. I regard that myself as a matter of prime importance. I think it is absolutely essential we should be quite sure the student's examination is the same in London and Edinburgh. If, then, either school complains that its students are rejected, the school complaining may feel quite sure that the fault lies with the students themselves, and not with the Examining Boards. As regards the medical portion of the examinations, I am afraid we shall never be able to bring about an amalgamation, because the medical examiners are so much employed that I do not think we could get them to come from Edinburgh to London, or from London to Edinburgh. But as

regards the veterinary students and the examiners, we have succeeded in getting two of our London examiners to go to Edinburgh, and I believe we shall succeed in getting the Scotch schools to send two examiners to London. Now I just want to say a few words about fellowships. We have not recommended for fellowship a single Fellow from private prejudice or friendship. What we have endeavoured to do is to select gentlemen who have in some way or other been honoured in the profession. First the President, then those who have been three times honoured by the profession by election to Council, then those who have a certain amount of standing in the profession—such as examiners or professors. There are one or two other qualifications which I do not recollect at this time. Since I have been sitting here a suggestion has been made to me by Mr. Greaves that prizemen at our different schools should be added. I think it is a very admirable suggestion. There is another subject to which I wish to refer, and that is the subject of fees. Hitherto the fees for veterinary students have been placed on a very low scale. I think the lowness of that scale is objectionable on several grounds. I think an increase in the fees would in all probability furnish us with a more highly educated class of students. If we are to give a high class of education, such as may be given in three years, it is essential the students should possess the education and capacity to profit by that instruction. But I wish to urge the increase of fees on another ground—namely, that very much more work has been thrown upon the professors by reason of the increased examination. In the old days there was only one class; it was then increased to two; and now if the number is increased to three, three times the number of lectures will necessarily have to be given, and the burden of the professors largely increased. I think that we should aim at placing the fees at such an amount that the schools may have for their professors the very best men found in the profession. I do not know what the present salaries of the professors are, but I think no professor ought to have less than £600 a year, and a junior £400 a year. I learn from my friend Mr. Greaves that when he wished to possess an eminently qualified young man he found it necessary to give £400 a year. If that is the case in private practice the schools must expect to pay as much if they wish to get the very best men; and for the instruction of the rising generation it is absolutely essential to get the very best professors we can. I believe that, on the whole, the Council during the past year have tried to do their best. As regards the future of the profession, I believe there is a bright prospect open to it. But if the profession is not merely to hold its own, but to be raised to that level which, I think, it ought to hold among the great and learned professions of the nineteenth century, we shall require the most earnest exertions of every man in the profession. Gentlemen, once more, on behalf of myself and the Royal College of Veterinary Surgeons, I have to thank you."

Mr. Jas. FREEMAN proposed "The Examiners," which was responded to by Mr. T. GREAVES.

Mr. M. E. NAYLOR proposed "The Veterinary Schools," which was also drunk with musical honours.

Professor WILLIAMS, in responding, said, with reference to the observation of the last speaker that he was sorry there were so many schools, particularly in Scotland, *he* was also sorry, being of opinion that one great institution would be better calculated to do good than several small ones. They were all aware that he was compelled by circumstances, to which he need not refer, to establish a second school in Edinburgh. This had so far been crowned with a much greater success than he ever expected. A good deal had been said about professors, but there were two sides to every question. A professor ought to do his duty, and ought to lecture upon every legitimate subject, according to what he had promised to do; but at the same time if

an angel were to come from heaven and lecture to some students it would be of no use. How could they make bricks without straw? It required both students and teachers—the one to receive, the other to give. He was in favour of increased fees. The quality of the students would be improved, and the professors better paid.

The other toasts were "The Veterinary Profession," proposed by Mr. C. Stephenson and responded to by Mr. T. Hopkin; "The National Benevolent and Defence Society," proposed by Mr. Cuthbert and responded to by Mr. P. Taylor; "The President," proposed by Mr. J. S. Carter and responded to by Professor Williams; "The Visitors," proposed by Mr. J. M. Axe and responded to by Mr. Poyser; "The Ladies," proposed by Mr. W. G. Schofield and responded to by Mr. Spillman.

LANCASHIRE VETERINARY MEDICAL ASSOCIATION.

THE annual meeting of this Association was held at the Blackfriars Hotel on January 17th, the newly-elected President (Mr. T. Hopkin) in the chair. There was a very large attendance of members of the profession—so large, indeed, that the meeting-room could scarcely accommodate them all. Among those present were Messrs. G. Heyes, Morgan, C. Elam, T. P. and W. A. Taylor, J. and A. Lawson, Locke, Roberts, Greaves, Faulkner, Woods, Whittle, Bunnel, Fleming, Mulineux, J. B. Taylor, Schofield, Woolner, Atkinson, the Secretary, etc.

Letters of excuse were read from Professors Walley, Williams, McCall, Simonds; and Messrs. Stanley, Barnes, Reynolds, Walker, Welsby, Gerrard, and Col. Fitzwygram, Bart.

The PRESIDENT delivered the following address:—

"Gentlemen,—Eloquence is not born on the lip, or knowledge in the brain, and you have called upon me to fill this important post before I have acquired much of either. You must, therefore, deal leniently with me, and exercise very largely that inestimable virtue 'patience.' Looking at the veterinary profession of to-day, we see much that needs doing before it will be just to itself and have attained a state of efficiency to satisfy even its present members.

"If we compare it with what it was some years back, we can then see the great and important changes that have been made. The very foundations of the old structure have been relaid, and barriers erected to keep the ignorant and illiterate from swelling our ranks. You will see how necessary this was, when you think that in a few years the children of our streets—thanks to the Compulsory Education scheme—will possess an education quite equal to what has made many a good 'practical veterinary surgeon.' The last time I addressed you I pleaded for 'practical men'; and as we want men for the veterinary profession as *nearly perfect* as it is possible to get them, I go still further, and say they ought to have the *foundation* that a classical education alone can lay. This ought not to prevent a man making a thoroughly successful practical veterinary surgeon. The plea so often urged, that it unfits him for much of the work a veterinary surgeon is called upon to perform, will in time give way. The place and manner in which a classical education is often gained would perhaps do more to unfit him than the education itself. A well-trained mind should be no barrier; but a career at one of our universities—associating with those who are not destined to win their own bread—would unfit some young fellows for working in our profession. I would just ask, in passing, is our work necessarily of an unpleasant kind? A good share of that done by some veterinary surgeons is in reality more in the province of the nurse, *alias* groom or blacksmith, than the veterinary surgeon.

"If we want minds capable of dealing with the difficulties of science, those minds must be cultured and trained before they come to the study of science. The Marquis of Ripon, speaking the other day, said, 'The education given to the middle classes is barely enough to enable them to commence their real education, when they are leaving school and going out into the world.' Ask any man with ambition, and who has received but an indifferent education in his youth, what has been his experience, and he will tell you of hard toiling to acquire what another, who has had his mind properly trained, accomplishes with scarcely an effort.

"The field is vast enough for the best trained and highest intellects; and we look upon those in our ranks with pride who are trying by careful, patient, persevering labour to win from science her secrets. You will all agree with me that one of the best qualifications for this would be a mind accustomed to systematic mental exertion. Again, the Educational Committee's report says that those who are desirous of becoming veterinary surgeons must be examined in some sixteen or seventeen professional subjects. Now, to thoroughly master these, and pass creditable examinations, you require youths whose minds have been fairly cultured. A man may forget his Latin and Greek, but his mind will never lose the benefit accruing from such a training.

"This naturally brings us to the preliminary examination, which certainly lacks the healthy tone that it would gain if placed in the hands of a purely disinterested party.

"The schools ought to have no more to do with the preliminary than they have with the professional examination; and it is be hoped that the mistake of leaving this nominally in the hands of the various professors will soon be rectified. If the professors are, as I take them to be, men with the interests of their profession at heart, they will give this change their unanimous support.

"Much has already been said on the desirability of some steps being taken to prevent unqualified men usurping our title and our rights. With more stringent examinations, more candidates will be rejected, and the country will be infested with 'quacks.' One of the difficulties would have been the opposition of the Scottish section, because of its shutting out from practising those holding the Highland and Agricultural Society's certificate. Could not the thing be framed so as to admit the present holders of the Scotch certificate, provided *they discontinue granting them?*

"When the Council find how earnestly action in this matter is looked for, and how, to a man, the profession would support them, we shall no doubt soon hear of some effort being made to remove this, one of the injustices to which we, as a body, have to submit.

"Our profession has not yet taken the position it is destined to occupy, but we trust we may, without fear, regard the future as big with promise; and more especially if each member will only consider his own individual responsibility, and that on the character of every separate veterinary surgeon is built the veterinary profession.

"It has been to me a source of great pleasure for some time back to know that we should be honoured by such a guest to night as Mr. G. Fleming, a man who has evinced his love for the profession, to which he is an honour, by being first in every work that tends to raise and elevate it. With characteristic kindness he offered to do anything that he could to add to the interest of this meeting and the benefit of those attending it. I, therefore, have much pleasure in introducing him to you."

Mr. FLEMING, Royal Engineers, then delivered an extemporaneous address on "The Sanitary Aspect of Veterinary Sanitary Science in connection with State Medicine," in which he pointed out the great importance of

veterinary science at the present time, and its value to the public. The benefits it might confer, however, were not made available, simply because, as a science, it was scarcely yet recognised in this country. The absence of this recognition was a national calamity, and the losses incurred thereby every year were enormous. Not only was there an appalling loss of valuable property, but it could not be denied that the public health also suffered from this neglect. What with unhealthy food—flesh and milk—and the increased price of these—mainly due to the existence of suppressible and preventible diseases among animals, as well as the prevalence of maladies which are transmissible from the domesticated creatures to mankind—there could be no doubt whatever that the relations of Veterinary Sanitary Science to State Medicine were of a very close and important nature indeed. He particularly insisted on veterinary surgeons pressing their claims to recognition in this direction, and urged that medical men should not be allowed to dominate or control them in a matter which was solely their own, and on which these men were not at all informed. He gave instances in which the public welfare had suffered severely from this mistake of placing the investigation or suppression of disease among animals in the hands of those who were utterly incompetent by their training for the task; and, finally, earnestly insisted upon the urgent necessity for veterinary surgeons qualifying themselves in every way for the great and noble work they had to accomplish, and which would certainly be looked for at their hands if their claims were to be allowed.

This address, which occupied a considerable time, was listened to with great attention, and some valuable comments and illustrations were furnished by many of those present.

A cordial and unanimous vote of thanks was accorded to Mr. Fleming.

The members and guests afterwards dined at the hotel.

THE SCOTTISH METROPOLITAN VETERINARY MEDICAL SOCIETY.

THE annual general meeting of this Society was held on February 14th, in the London Hotel, Edinburgh—Mr. Balfour, Kirkcaldy, retiring President, in the chair. The other members present were—Professors Walley, Williams, Johnson, M'Fadyean; Messrs. Baird, Balfour, A. Balfour, jun.; Cunningham, Mitchell, Black, Young, Brown, Aiken (Edinburgh), Borthwick, Boyd, Melrose, Stone, Connachie, and Cumming.

Miscellaneous Business.

The SECRETARY (Mr. C. Cunningham, of Slateford) read several letters of apology from absent members, after which the minutes of the last quarterly meeting were read and approved. Professor Williams moved a vote of thanks to Mr. Balfour for his conduct in the chair during the last twelve months; and this having been seconded by Mr. Cunningham, was cordially agreed to. Mr. Balfour replied in appropriate terms, and thereafter vacated the chair in favour of Mr. Cunningham, who had been nominated at a previous meeting. Mr. William Cumming, Treasurer, was then elected Secretary in room of Mr. Cunningham. The following gentlemen were elected members of the Society:—Messrs. Connachie (Aytoun), Reid (Leith), M'Intosh (Dumfries), Dalling (Bathgate), and Professor M'Fadyean. Messrs. Mitchell (Bathgate), and P. Moir, of the Royal Repository, Edinburgh, were nominated for election. The Treasurer's statement showed a balance in favour of the Society of £21 5*s.* 5*d.*

Interesting Cases.

Professor WALLEY brought under the notice of the members a blood tumour taken from the heart of a cow. It was situate underneath the endocardium under the right auricle, and he had noticed reference made to a similar tumour in last month's *Veterinary Journal*, which was spoken of as having been a very large one. The one which he had submitted was almost as large as it was possible to find in the position indicated. It was in close connection with the base of the right auricle, and had been formed in the first instance by extravasation of blood underneath the lining membrane, which had given way, producing a rough surface, upon which successive layers of lymph were deposited. The centre portion had somewhat of a homogeneous appearance, but the layers could easily be traced. It was the largest one he had ever seen in that position, and he thought it was quite as large as that recently described in the *Veterinary Journal*. The next case submitted by the Professor was a portion of the trachea of a horse, in connection with which he intended to exhibit the larynx, but this he had inadvertently left behind. The animal from which this had been taken was a grey Belgian horse—a valuable animal, which during last winter was attacked with ordinary cold. After a time it became evident that the animal was suffering from throat affection, and experienced some little difficulty in respiration. This difficulty was traced or localised in the throat, and on the recommendation of Mr. Baird and himself, the operation of tracheotomy was performed by Mr. Baird. Since then (the summer) the animal had been daily worked with the tracheotomy tube in his throat. On the previous Sunday morning week, however, the horse was found dead in the stall and the tube was nowhere to be found. The horse was sent to the tanyard, and on examining it on the following day, Mr. Walley found the larynx cut up. Some one professing himself to be a veterinary surgeon had volunteered the suggestion that the horse had swallowed the tube. How the tube could have got inside the animal was a mystery, but following out this idea the so-called veterinary surgeon had cut up the whole length of the alimentary canal with the object of discovering the lost tube. The lungs were served in like manner, and in consequence the bronchial tubes were so hacked about that a satisfactory examination could not be made. Some one went away with the idea that the lungs were rotten; but, on the contrary, they were in beautiful condition—there was not the slightest trace of disease, the structure being perfectly healthy and firm. The larnyx was hacked and chopped up into several pieces, but it presented a beautiful ossifying encondroma or bony tumour, which had entirely obliterated the aperture of the larynx. The trachea at the site of the operation was greatly thickened and in part bony, with a considerable amount of extravasated blood around the orifice; and adherent to its interior there was a large clot of blood. Although no blood clots were found in the bronchial tubes, Professor Walley's opinion was that they had been there, and had produced death by suffocation. The aperture had become so grown up that inspiration of air would be impossible. It was satisfactory to find that their diagnoses as to the localisation of the disease were quite correct. The mere removal of the tube for several hours might have caused the animal's death, without clotted blood passing into the lung. The peculiar change which had taken place in the trachea as well as in the larynx rather pointed to a constitutional taint.

Professor WILLIAMS referred to what he conceived to be a similar case. A horse in his stables had worn the tracheotomy tube for some months after an operation. The tube was taken out to be cleaned, and some difficulty was found in reintroducing it, as the aperture had become exceedingly small. On making an incision into the trachea, to get the aperture enlarged, there

was such an amount of hæmorrhage that the horse must have lost at least a bucketful of blood—owing, no doubt, to the increased vascularity of the part from the intrusion of the tube. They dare not introduce the tube under these circumstances; so that it was quite possible that such a state of things might be due to the increased vascularity of the part, without the animal having been tampered with in any other way.

Mr. BROWN suggested that a spiral wire covered with cloth should be introduced into the tubes referred to, so that they might be cleaned by simply removing the wire instead of having to take out the tube. That, he thought, would lessen the danger consequent on the removal of the tube.

The Horse Epizoöty.

Professor WALLEY, at the request of the members, referred to the horse epidemic now raging in Edinburgh. Instead of the word "epidemic," he was of opinion that the word epizoöty should be used with reference to animals. So far as his practice in Leith went, the outbreak was for long confined to the north side of Leith, especially the north side of Constitution Street. It afterwards began to spread on the south side, involving the isolated districts lying between. It did not locate itself in any particular stable, but after it commenced he had known it go through a whole district and not leave a single horse untouched. He had also known it affect only one horse in a stable, leaving the rest free; whilst in other cases at least half the horses were attacked. In this respect the outbreak had shown a very great peculiarity. Another peculiarity he noticed was, where it attacked two cows in the same place. The fatality of the infection was always a matter of very great importance, and the disease had shown that in the absence of proper treatment, and where the animals were not taken great care of, it could assume a very virulent and very destructive character. In his own practice he had only lost two horses, both old animals, which had suffered from previous chronic disease, one having broken-up lungs, and the other old standing dilatation of the cæcum. Another remarkable thing in connection with the localisation of the disease was a primary tendency to attack previously diseased structures. In many cases its symptoms were confined to the exterior of the body; in others it localised itself in the intestines; whilst in very few cases it seated itself in the lungs, and in a few instances in the liver. In those cases where it was localised in the intestines colic was the primary symptom, accompanied by constipation—in one animal three days having elapsed before any fæces were passed. The bowels were in such cases from half an inch to an inch thick, owing to the effusion underneath the mucous membrane. The nature of the disease was purely and simply an epizoötic and effusive Fever in every sense of the word. With regard to the febrile symptoms, some of his cases had been very marked, the temperature running as high as 106 to 107 for four or five days. The mouth was always hot and dry, as in most fevers, and had a somewhat peculiar odour. In the course of four or five days the mouth became sometimes more or less moist, and the disagreeable odour passed off. The eyes were always injected, and frequently of a yellow tinge. The fæces at the outset of the disease were passed in the majority of cases in small quantities, and often coated with mucus, and sometimes tinged with blood. The pulse was always quick in these cases, running up to 60, 70, or 80, and was very weak. Respiration was not much interfered with, beyond being a little quick, unless the disease localised itself in the lungs. He also noticed that the animals evinced great uneasiness, amounting to inability to stand for any time in one position. Some recovered so far in two or three days as to be able to eat with avidity—some eating more than was good for them. The

conjunctiva of the eye was nearly always infiltrated with serum, and in some cases the cornea also, to such an extent as to cause it to assume a pendulous or baggy appearance. The lymphatics of the fore-arms were always prominent. These were what he considered to be the principal symptoms, though there might be a few others which had escaped his memory. With regard to treatment, he had never resorted to bleeding, although this had been suggested. Generally he administered laxatives at the outset; and whenever that operated freely, the animals made a more rapid recovery. They were allowed plenty of cold water, and whatever food they chose to take. Otherwise the treatment was of an eliminative and stimulating character, as the animals would not bear sedative or lowering treatment. Where there had been previous weakness, or where the constitution was bad, he administered gruel, eggs, and whisky, but he did this only in special cases which required such treatment. Where the disease was localised in the intestines, he had adopted such remedies as turpentine and hot fomentations, and where the lungs were affected, counter-irritants were applied, alternated with hot fomentations, with good effect. If the animal was the subject of a wound, such as a "slough," the wound almost invariably took on unhealthy action for a time, rendering lameness extreme. On a *post-mortem* examination he had found no indication of the inflammation of the cellular structures, except as a secondary result, or where disease previously existed; but he found general systemic effusion, and occasionally extravasation of blood, the blood itself being imperfectly coagulated. The broken-winded horse referred to recovered from the primary attack, but succumbed to the secondary lesions. It was interesting to note that in many cases in different parts of the country and surrounding districts, where the animals had been neglected, they died, and it was all very well to say that the disease was mild. So it was under certain conditions, but experience had shown that it was not to be trifled with.

Professor WILLIAMS intimated his intention to read a paper on this subject at a future meeting.

The newly elected PRESIDENT then delivered an address, in which he referred to the outbreak of Influenza. In a district where hard work, heavy feeding, and, if possible, no rest was the order of the day, no deaths had occurred out of seventy or more cases—due, he believed, to the prompt stoppage of work the moment anything was seen to be amiss. In these circumstances the epidemic was of a comparatively mild form, running a regular course of from four to ten days, requiring simply good nursing and occasional stimulants. He noticed that "quarter" horses on farms, or those in carters' hands going in and out from Edinburgh, were generally among the first attacked, this seeming to point to contagion or infection; but other facts were against it. Another disease, causing more trouble and anxiety from its fatal character and the valuable animals it attacked, had been much more frequently met with this winter than usual—namely, that which was called Hysteria, or by Principal Williams Nitrogenous Urine. Pleuro-pneumonia still existed among us. In the byres of a certain class of dealers and dairymen might be found, he thought, the cause of a good deal of it. These worthies hid the existence of the disease when they had it, sold off all the other cows that would sell if they could, and disposed of the diseased ones in the best way possible; and if they could get compensation besides, had not they a nice laugh over it? They thought they were very clever! They did not seem to see that they were travelling in a circle, for as they did to others so would others do to them. Let the owners of diseased cattle deal openly and at once with the inspectors and local authority, and let the local authority deal kindly and liberally with them, and another very important step would be achieved in the suppression of the disease; but so long as

this hide-and-seek, cat-in-the-manger policy existed, much good that might be done would be left undone. Rinderpest was spreading in London. He hoped it would never reach them, and he need scarcely say, "Watch, be on your guard; try everything, do everything to detect and, if possible, prevent it from getting a footing, if it ever should come." In conclusion, a feeling allusion was made to the loss sustained by the profession in Professor Fordie, Glasgow; Mr. Aitken, Kilmarnock; Mr. D. Maclean, and Mr. Cockburn, Glasgow, who had died during the past year.

Professor WILLIAMS moved a vote of thanks to the President for his excellent address, containing many matters of vital importance to the profession. He often laughed on seeing in the *Scotsman* and other papers the announcement that Pleuro-pneumonia had broken out at Wishaw, Dysart, Perth, and so on, when it was the fact that there were cases of it every week in Edinburgh. He thought the attention of local authorities might very well be directed to what was but too prevalent—the practice of taking cattle into infected byres. The thing was said to be illegal, but the Act of 1869 gave no power in such cases. He thought, however, there would be no difficulty in getting the Act extended so as to afford such power, without which there was little hope of their being able to cope with these outbreaks.

Principal WALLEY, in seconding the vote of thanks, corroborated these remarks. He ridiculed the present restriction of thirty days regarding infected buildings, and specially referred to the absurdity of allowing fresh animals to be put in infected byres, as it was only providing fuel to feed the fire, and perpetuating the disease.

The vote of thanks was carried unanimously, and on the motion of Professor WALLEY, seconded by Mr. BAIRD, a vote of condolence was passed to the relatives of the late distinguished members of the profession whose loss was deplored in the President's address.

The PRESIDENT having briefly responded to the compliment which had been paid to him,

Professor WALLEY gave notice of a motion relative to the advisability of establishing a Scottish branch of the Veterinary Mutual Defence Society, and promised to lay the objects of this before them at their next meeting.

MONTREAL VETERINARY MEDICAL ASSOCIATION.

THE above Association held its regular fortnightly meeting on Jan. 25th, the President, Mr. D. McEachran, in the chair. There was a large attendance of members and visitors present, among whom were noticed J. M. Browning, Esq., President of the Board of Agriculture, and E. Banard, Esq., Director of Agriculture, Quebec.

The following papers were read:

Mr. D. S. BROWN, of Illinois, read a communication on the "Removal of a Cartilaginous Tumour from the Eyelid of a Horse." The case was a very interesting one to the profession, owing to the operation having been performed under the influence of chloroform.

Mr. C. C. LYFORD, also from Illinois, read a most scientific and well-prepared paper on "Elephantiasis," describing the disease, its causes and mode of treatment minutely. The speaker, in course of his remarks, exhibited microscopically some excellently prepared specimens of the disease, showing the marked difference of the tissues in health and in the disease under consideration. Plaster castings of the disease were also exhibited to the members.

Mr. SWINBURN, V.S., communicated a case of "Break-down," accompanied by fracture of the sesamoid bones, which was considered interesting owing to its rarity.

At the next regular meeting, Thursday, Feb. 8th, Mr. John Ryan read a paper on "Specific Ophthalmia"; and Mr. C. J. Alloway, V.S., a communication on "Congestion of the Lungs."

The Association held its next fortnightly meeting on Feb. 22nd, in the lecture room of the College, the President, Professor D. McEachran, in the chair, with a good attendance of members present.

The PRESIDENT, on behalf of Williamson Bryden, Esq., V.S., Boston, presented to the Association two very valuable books—"Ringer's Therapeutics" and "Wood's Materia Medica."

Mr. WM. A. MURPHY, of Boston, communicated a case of "Acute Laminitis" successfully treated by himself last summer.

Mr. D. S. BROWN, of Illinois, read a very instructive paper on "bots," in which he described the different varieties of the fly and chrysalis, illustrating his remarks on their structure by diagrams, the living larvæ and microscopic preparations. He gave a minute description of these curious entozoa, and offered several original remarks on the subject.

In commenting on the paper, the President suggested that it should be published in the *Veterinarian* and the *Veterinary Journal*, and that microphotographs be prepared to illustrate it for the benefit of the profession.

The PRESIDENT called the attention of the Association to the prevailing enzoötic disease in the horses in the city at present, and explained that it was varioloid in character and resembled closely Small-pox in its nature; that it was known by the name of *Variola Equina*. He suggested that by inoculating cattle with the lymph, vaccine might be produced for the use of the medical profession. He called attention to two instances in which the grooms had become inoculated, one on the face and neck, the other on the arm; in both the vesicles resembled in all respects those produced by vaccination.

At the next meeting, on March 8th, Mr. Charles Levesque, V.S., of Berthier, was to read a paper on special operations.

ROYAL AGRICULTURAL SOCIETY.

AT the monthly council meeting, held on March 7th,

Mr. WELLS (Chairman) reported the satisfaction of the Committee at the prompt and energetic action of the Privy Council in stopping the fairs and markets in the East Riding of Yorkshire, especially the great York market, which would otherwise have been held on the 22nd February. They learnt also with satisfaction that the President of the Council had stopped all fairs and markets in Lincolnshire, that no fresh cases had occurred in the Metropolis since last week, or in Hull since the 27th February. Mr. Duguid reported that he had visited Chelmsford to inspect some animals stated to have died from Cattle Plague, but he found that the disease was Splenic Apoplexy, and that proper measures to restrict the progress of the outbreak had already been taken. This report having been adopted, the Chairman added that subsequent to the meeting of the Committee the following notice had appeared in the *London Gazette* of Tuesday night:—"Since the notice in the *London Gazette* of the 27th of February last Cattle Plague has been detected in a dairy at Bow, and in a dairy at Hackney, both within the Metropolis; also in a dairy at Hull, Yorkshire."

Mr. RIDLEY, M.P., asked the date of these last outbreaks of Cattle Plague, as they were not stated in the *London Gazette*, and he thought the Council might fairly ask the Privy Council to publish in future the dates of such outbreaks.

Mr. BOWEN JONES then moved the following resolutions, of which he had given notice :—"That a memorial be presented by this Council to the Government, calling attention to the insufficiency of the present regulations for the prevention of the introduction and spread of contagious diseases in cattle, and urging upon it the necessity of insisting—1st, That any live animals imported into this country for food shall be slaughtered at the ports of debarkation; 2nd, That to prevent the exclusion of valuable store stock, such stock may be imported under license and subject to quarantine at certain ports, which shall be set apart for the purpose; 3rd, That uniform and compulsory measures shall be enforced throughout the kingdom for the suppression of contagious diseases in cattle." He had thought it better to bring these resolutions before the Monthly Council than before the Special Council, which had been so wisely called to meet on the 20th of last month, because they applied more to the general policy than to the specific outbreak of Cattle Plague which that Special Council had been called upon to deal with. The first resolution did not entirely embody his own views, but he had been given to understand that he might receive more support from other members of the Council by advocating the slaughter of cattle at the ports of debarkation instead of the ports of embarkation. Up to the 16th of January sheep and goats from Germany could be landed in England, and if found healthy, after twelve hours' detention, could go into all parts of the country, with the danger of carrying infection with them. He felt that there were other diseases of stock to be taken into account besides Cattle Plague, and that with regard to Pleuro-pneumonia and Foot-and-mouth Disease, the slaughter of animals at the port of landing would cut off the great source of infection. The detention of twelve hours' duration was often insufficient to enable disease recently engendered to be detected at the port of landing, and therefore both the farmers and the consuming public suffered immensely from the diseases thus imported into English flocks and herds. If this resolution were carried, the officers of the Veterinary Department would have more time to attend to the home flocks and herds, and the diseases to which they are naturally subject.

Mr. HEMSLEY having seconded Mr. Bowen Jones's resolutions,

Mr. JACOB WILSON referred to what had taken place at the last Council meeting. He reminded the Council that the resolutions then proposed by Mr. Bowen Jones were withdrawn, partly that the Council might be enabled to go to the Government with an undivided front, and partly in the hope that the regulations made by the Privy Council would prevent any further outbreak of Cattle Plague. This hope had not been fulfilled; and the general opinion in the country now was that nothing short of total prohibition would meet the case. Special attention was being directed in every district to the outbreak of Cattle Plague which was now threatening us, and it appeared that a cargo consisting of diseased cattle and various merchandise, together with passengers and crew, might carry contagion all over the country, owing to the laxity of inspection in foreign countries. But even good inspection was not always sufficient to stop the importation of disease, and stronger measures than those now in existence were necessary for the protection of English herds. He would draw the line at the European ports, as at present they were quite helpless, with no stronger protection than slaughter at the ports of debarkation in England. He regarded the "following" policy of the Government, instead of the "leading" policy, which they should adopt, as a mistake; but he recognised the prompt action of the Privy Council at the first outbreak of the disease, although it had not been successful. This matter was beyond the range of politics, and affected the consumer as much as the producer, the Rinderpest having been the chief cause of the high price of meat in recent years. The Americans had now settled the problem

of feeding the people by the extension of the dead meat trade, but he would be prepared to exclude even dead meat, if it were likely to bring with it Cattle Disease. The internal regulations which they had to submit to were harassing and not always effective, besides being often evaded. Quarantine places he regarded as impracticable, because in the case of three or four cargoes of animals arriving within a short time, the healthy animals must of necessity walk over the same ground as the diseased cargoes. Therefore he would draw the line of prohibition a little further off than it is at present, and insist upon animals being slaughtered on the other side of the water. He had been told that no Government could possibly pass such an order; but if not, then he hoped some independent member would rise in the House of Commons, and move a resolution to the same effect as his amendment. But to-day he asked the Council for an unfettered expression of their opinion upon it. He, therefore, moved as an amendment, in place of the first and second resolution, and the preamble of Mr. Jones's motion, the following:—"That seeing the precautions hitherto adopted for the prevention of outbreaks of Rinderpest and other contagious diseases of animals in Great Britain have not been successful, it is the opinion of this Council nothing short of the total prohibition of the importation of live stock from European ports will meet the exigencies of the case."

In reply to Mr. WELLS as to the statement in Tuesday night's *Gazette*,

Professor BROWN stated that the outbreak of Cattle Plague at Hull was one of four which had occurred in the infected district, and the disease had not extended beyond that area. The last case in Hull had occurred on Feb. 27th. In the metropolitan area a case had occurred at Hackney on the 3rd of March, and in Essex another case on the 4th of March. Up to the present time 138 animals, healthy and diseased, had been slaughtered from either being affected with Cattle Plague or having been in contact with diseased animals; but generally only one or two animals in a dairy had been attacked, and the rest were immediately slaughtered. The disease had not spread to any important extent beyond the area of the first outbreak in each case. The Hull outbreak had nothing to do with that in the Metropolis. On the 12th and 14th of January, two cargoes of animals were landed at Hull from the same sheds in Hamburg which had housed the infected animals that had been sent to Deptford, and one cargo left Hamburg on the same day and within a few hours of the *Castor*, and would have arrived in Hull simultaneously with the *Castor's* arrival at Deptford, but that the *Castor* laid off Gravesend all Sunday night. The officials at Hamburg declared the existence of Cattle Plague on the day after the infected cattle left that port, and they not only killed all the animals, but burnt down some of the buildings in which the animals had been kept, as the best means of disinfecting them. It now appeared that soon after the arrival of one of the cargoes at Hull, one animal presented peculiar symptoms, from the description of which, and from the *post-mortem* examination by the inspector, taken in connection with the other evidence, Professor Brown had no hesitation in pronouncing the disease to be Cattle Plague. The disease had reached the dairies in Hull, as it reached the farms in the East Riding of Yorkshire in 1872, from Russian animals which had never been landed. In each case persons employed about the animals must have carried the infection. The disease had lingered in the original centres of infection, but the area had not at present been materially extended. All the authorities are now quite alive to the danger, and many of them have imposed restrictions on the cattle traffic. If absolute powers were possessed by the English Government, such as exist in Germany, a cordon might have been drawn round the centre of infection, and the animals slaughtered immediately or kept within very limited bounds. Under such a system Hamburg, Berlin, and Breslau have been already

declared free of Cattle Plague; but it still lingers in Saxony; and Professor Müller, the State Veterinary Surgeon in Berlin, had come to the conclusion that the lesson to be derived from this recent outbreak was—that all cattle markets in large towns in Germany ought to be closed as soon as a declaration of Cattle Plague was made at any place on the frontier.

Colonel KINGSCOTE seconded Mr. Wilson's amendment. Professor Brown had shown conclusively how difficult it was to eradicate the disease when once it appeared, and it occurred to him that if the *Castor* had pursued her course, instead of laying off Gravesend all night, the disease might have got much farther into the country before it was discovered, than it had done under the actual circumstances. He regarded Mr. Bowen Jones's resolution as not going far enough, and, in his opinion, all animals ought to be slaughtered at the port of embarkation, or at least the import of all live animals should be prohibited.

Mr. BOWLEY never felt so much the responsibility of his position as a member of the Council. The whole of the agricultural interest throughout the country were now looking to this Council to take action in reference to this outbreak of Cattle Plague; and, fortunately, the recent importation of American meat had shown that the prohibition of the importation of live stock would not be so great a hardship, either to Continental people or to consumers, as we had previously believed. He should, therefore, support Mr. Wilson's amendment.

Earl CATHCART expressed his obligations to Professor Brown for the lucid statement which he had made to the Council. His lordship did not intend to say anything upon the general question, but he would remark on the proposal to import nothing but dead meat, which, as Professor Brown had said, may also bring disease with it. He had studied the dead meat market practically. The practical difficulty which he saw was, that the poor were largely dependent upon the supply of offal for their animal food. This offal was perishable, and probably not worth carrying long distances. The Council should, therefore, look at all the circumstances surrounding the question, and the Government would certainly have to consider the circumstances before coming to any decision on such a resolution as that before the Council.

The PRESIDENT remarked that the proposal to prohibit the importation of live stock would affect a very large interest known as the fellmongers' trade, which was dependent upon the importation of hides, horns, and hoofs, and it would be a serious thing to destroy such an enormous industry.

Mr. CHARLES HOWARD cordially supported the amendment. There was a very strong feeling in the midland counties, as well as in the north, that pressure ought to put upon the Government in reference to the importation of foreign cattle. He trusted that the Council would pass a very firm resolution, as, in his opinion, the breeders and feeders of cattle in England ought to be considered more than the consumers of foreign offal. The English farmers within the last few years had lost more money from foreign diseases than the worth of all the foreign cattle which had been imported in the same time; and the farmers were not now in a position to bear the burden of another outbreak of Cattle Plague.

Professor BROWN spoke a few words on the general question. It had been suggested that the importation of foreign cattle should not be permitted—as a temporary measure at least; the object being, presumably, either to limit the extent of the present outbreak, or to prevent the introduction of fresh centres of infection. The action already taken by the Privy Council had practically met these objects, as the importation of all animals from countries from which Cattle Plague could come had been totally prohibited, while animals from some other countries must be slaughtered at the port of landing. The countries from which animals could still be imported and pass into

the interior of the country, had protected themselves from Cattle Plague for at least a hundred years: in them, indeed, so far as was known, the Cattle Plague of our time had never appeared. It had been apprehended that possibly Cattle Plague might be imported into this country by sheep, but, as a matter of fact, this had never occurred, and it therefore would seem superfluous to provide for a contingency which had never yet arisen. Mr. Bowen Jones's resolution, if put in force, would necessitate the remodelling of the arrangements at all the landing-places in Great Britain, with, perhaps, the exception of Deptford, and would therefore have to be discussed and passed in the House of Commons before it could be adopted. If the English Government were to pass an order such as had been suggested, it might fairly be alleged that England had broken faith with the Governments of those foreign countries which had agreed to all our proposals, and had made successful efforts to keep disease out of their territories.

In reply to Earl FEVERSHAM,

Professor BROWN stated that under the present regulations cattle could not be moved from the borough of Hull into the East Riding of Yorkshire, but the authorities of the Riding could not prevent cattle from Hull from passing through their district.

Mr. MARTIN had a vivid recollection of the appalling scenes which he had witnessed during the last great outbreaks of Cattle Plague, and many of the smaller farmers had never recovered from the loss which they then sustained. The only safety lay in slaughter. Nothing would satisfy agriculturists except the prohibition of the importation of live stock from foreign countries, and he wished the Government could be persuaded to adopt preventive means before Cattle Plague appeared, instead of afterwards. With regard to the argument that fellmongers' and other trades might suffer, he stated that many trades had already been sacrificed for the good of the country, and especially instanced mail coaches at the time of the introduction of railways.

Mr. AVELING referred to the horrible sufferings of animals which came across from the Continent in steamboats, and expressed the opinion that the flesh of such animals was not so wholesome as that of animals killed on the other side of the water.

Mr. STRATTON hoped that no temporary measure would be recommended, as the Privy Council had already made excellent regulations of that nature. He did not complain that they had heard too much about Foot-and-mouth Disease and Pleuro-pneumonia, and he thought the Council had a right to ask the Government for protection for the farmers from these diseases.

Mr. BOOTH recalled the statement, made a month ago, as to the limits of the outbreak of Cattle Plague. He reminded the Council that these limits had since been exceeded, and the ultimate development of the outbreak could not be stated. During the last twelve years they had had three different outbreaks, and another might occur in three months' time. He thought, therefore, the Council ought to urge the Government to take the means proposed by the amendment, to avoid such a contingency. Only 5 per cent. of our consumption of meat was imported from abroad as live stock, and 27 per cent. of these animals were slaughtered in consequence of forming part of diseased cargoes. Although we continued to admit stock from foreign countries, all foreign countries declined to take stock from us, as also did our colonies. Therefore we should look to means for our own protection.

Mr. RIDLEY, M.P., in supporting the amendment, stated that he had come to his present opinion with considerable hesitation, as he was aware of the practical difficulties which surrounded the question. The Council of the Society were not legislators, and they must leave the Government to deal with the difficulties of the question. He hoped that the Council would be

practically unanimous in the expression of their opinion to-day, and that they would state their belief that prohibition of importation of live stock was the only means of preventing the importation of diseases of cattle.

Mr. BOWEN JONES said that all members of the Council had obviously the same object in view, and the only question was, the best means for its attainment. Their ultimate object, no doubt, was the establishment of a dead meat trade, and he was willing to withdraw his first two resolutions in favour of the amendment.

After a few words from Mr. WELLS, expressing his reluctance to prohibit the importation of store stock,

Mr. Wilson's resolution was put to the vote and carried unanimously.

The third resolution of Mr. Bowen Jones was also carried unanimously—viz., "That uniform and compulsory measures be enforced throughout the kingdom for the suppression of contagious diseases of cattle."

It was then moved by Colonel KINGSCOTE, seconded by Mr. JACOB WILSON, and also carried unanimously, "That the foregoing resolutions be conveyed to the Lord President of the Privy Council."

Parliamentary Intelligence.

HOUSE OF LORDS.

CATTLE PLAGUE.

Feb. 22nd.

EARL FORTESCUE rose for the purpose of calling attention to the outbreak of Cattle Plague in Essex and Yorkshire, and of asking the Government what steps had been taken to prevent the spread of the disease. The importation of live cattle was a trade which had sprung up in our own time. It was one of the results of Sir Robert Peel's free-trade measures. He was convinced that without the slaughter on the other side of the Channel, instead of this side, of all animals which were intended to be used as food in England, our valuable flocks and herds would be very inadequately protected from disease. In connection with this matter there was another point which their lordships should consider, and that was the cruelty which was inflicted upon animals under the present system. If any of their lordships had had the misfortune, as he had had, to witness the disembarkation of stock, and especially of fat stock, they could not but have been satisfied that the interests of humanity would be immensely promoted by the abolition of a process which inevitably entailed a terrible amount of suffering. As many of their lordships must be aware, when there was stormy weather at sea the hatches of the ships in which stock was being conveyed here had to be closed; and at the end of the voyage a number of animals were frequently found to have been suffocated. Where suffocation had not taken place, the animals were found to have suffered severely, and he could not believe that in the state in which they must necessarily be after a stormy passage they could be very desirable food for consumption in England. Dead meat had been successfully imported from across the Atlantic, and there should be no difficulty in also bringing such meat to our shores from Hamburg, Rotterdam, and the French coast. He had been told that in one English county alone the loss of property, in the shape of cattle, which had taken place in consequence of cattle disease, had amounted to at least two millions sterling; and, if that

were the case, it would surely be sound political economy, as a simple matter of insurance, to take the precautions which he had indicated. The noble earl proceeded to refer to the views which had been expressed by the Central Chamber of Agriculture and Farmers' Club on this subject, and concluded by putting the question of which he had given notice.

The Duke of RICHMOND.—"I am not at all surprised at the anxiety manifested by the noble earl to obtain information upon the matter which he has made the subject of the question addressed to me. The matter is one of such immense importance, and the consequences which would follow the spread of the dreadful disease known as the Cattle Plague would be so disastrous, that it is only natural the subject should be of interest and concern to your lordships, and that you should desire to hear some statement from me in reference to it. But while that is the case, I have no doubt, with all your lordships, I think that the introduction of the subject at the present time has very appropriately fallen to the noble earl who has just spoken (Lord Fortescue), holding, as he does, the very honourable position for the year of President of the Central Chamber of Agriculture, an association which includes amongst its members some of the most eminent agriculturists in England. When I read the question which the noble earl placed upon the table I was not prepared, however, for the arguments and the speech which he has given us on this occasion in regard to Cattle Plague and the best way of preventing its introduction into this country. I think he was not quite correct in the statement which he made in the course of his observations, that it was only since the year 1846 that animals were allowed to be imported free into this country. The fact is that up to the year 1833 there was perfect freedom in regard to importation of stock into this country. From 1833 to 1842 there was a prohibition; from 1842 to 1846 they were admitted on payment of duty; and from 1846 up to the present time they have been admitted free, as every one knows, under certain regulations. I hope the noble earl will also pardon me if I venture to differ from his statement that it is only since 1844 that the disease known as the Rinderpest first appeared in this country. I believe it will be found that years before that there were complaints of a disease which, if not absolutely the same as the Rinderpest, was very like it. The noble earl went on to refer to an important document which I had the honour to receive from the Central Chamber of Agriculture; and one of the suggestions made in that document was that the animals should be slaughtered at the port of debarkation; but the noble earl proceeded to indicate that he considered that would not be sufficient. In fact, he would practically prevent the importation of all stock into this country."

Earl FORTESCUE.—"Not all."

The Duke of RICHMOND.—"So far as I have been able to ascertain up to the present time, the great difficulty in this matter has been to distinguish between fat stock and store stock; and to say that we should prevent the introduction of fat stock—that we should only allow animals to come in as store stock—is to declare that a thing should be done which it would be almost impossible, if not quite impossible, to do. The noble earl is a free-trader; but if such a proposal as that were carried out, it would really be going back to the days of protection—days, however, which I am not here at the present moment to discuss. The noble earl also said that the experience which we have had of the importation of American meat should have satisfied us that the plan followed in regard to that meat had solved the difficulty, and that we ought to take measures to insure that all meat, of whatever character, intended for food in England, should be brought into this country in a like manner. But I scarcely think we have had sufficient experience yet of that trade to justify us in saying that it has been completely successful.

The noble earl also alluded to France in the course of his remarks ; and certainly with a sea passage of only some two hours there is nothing, I apprehend, to prevent that country from following in the footsteps of America. The noble earl likewise stated that if all animals were prevented from being brought into this country alive we should ensure that the Cattle Plague would not exist in England ; but I would remind the House that a remarkable instance, contradictory of that view, was afforded on the occasion of the last visitation of the disease to Ireland. With reference to the immediate question of the noble earl, perhaps your lordships will permit me to state a few facts. On the 15th January a paragraph appeared in the newspapers stating that the Cattle Plague had broken out in Germany. Without waiting for official confirmation of that report, I telegraphed to the inspectors at the various ports of this country, and requested them to be specially careful in regard to the stock which came under their observation from abroad. The same evening a cargo arrived by the ship *Castor* at Deptford, from Hamburg, and unfortunately the Plague was discovered amongst that cargo. One animal had died on the voyage, and when the ship was inspected other animals were found to be affected by the disease. On the 16th January the animals were slaughtered, and their carcases and skins were all destroyed. Then, my lords, on the same day an Order in Council was passed requiring that all sheep and goats from Germany should be slaughtered at the port of debarkation, and a circular was issued to all the local authorities informing them that the Cattle Plague had broken out at Hamburg, that an infected cargo had been landed at the port of London, that strict inquiry should be made, and that all doubtful cases should be dealt with without delay. I caused the animals on board the ship *Castor* to be slaughtered, and, somewhat exceeding the powers I possessed, I requested the inspectors to detain vessels till they had been disinfected to their satisfaction. I also induced the shipowners to agree that for the space of one month they would not carry any animals on board their ships. Private information next reached me that sheep and goats might possibly come through Belgium and France from Germany, and I therefore considered it necessary to issue an Order in Council scheduling those countries. Then further information reached the department that the disease had spread considerably in Germany, and an Order in Council, dated January 27th, was issued prohibiting the importation of cattle altogether from Germany and Belgium, and that sheep and goats should on their arrival be slaughtered. These precautions were taken on account of the prevalence of the Cattle Plague in foreign countries, and up to that time we had no information of any Cattle Plague at home ; but on the 31st January a suspicious case occurred at Limehouse, and I requested that all the animals in the same shed should be slaughtered and their carcases destroyed. We received every assistance from the Metropolitan Board of Works, and on the 31st January a *cordon* was placed around London, and no animal was allowed to go outside the metropolitan districts. On the 1st February I communicated with the commissioner of police and the railway authorities in order that they might take the necessary precautions, and on the 2nd an Order in Council was passed prohibiting the holding of fairs and markets within the Metropolis except by license. On the 3rd there was a fresh outbreak at Poplar, and another at Bow, and I then sent an inspector to visit all the dairies. There were further outbreaks in Poplar and Millwall, Hackney and Hackney Wick; and on the 8th February we heard of the appearance of the disease at a place on the frontiers of the Netherlands, and though not actually in that country, I thought it necessary to schedule the Netherlands. Just then, for the first time, the disease appeared outside the Metropolis, although only so far off as Stratford ; and upon that an Order in Council was issued, giving local authorities power to

prohibit markets and fairs and removals of cattle without license. I thought it better that they should have this power to do it themselves, because they would best know the requirements of their own localities, and it would enable them to act with promptitude on the spot and at the time, instead of having to delay while communication could be made to the Privy Council Office. When the Plague spread into Essex the local authorities availed themselves of the power so conferred, and in four petty sessional divisions prohibited the removal, except by special license. The result was that on the 31st January there were but nine cases in Limehouse, Millwall, Blackwall, etc., and the Orders in Council I have mentioned appeared to me sufficient to meet all the emergencies that would arise, and I hoped sufficient to stamp out the disease altogether. A case occurred at Hull on the 20th February, and on the 21st it was reported to us. I took it upon myself to advise that an Order in Council should be passed at once to stop all fairs and markets, except by license, within the East Riding of Yorkshire. I took on myself the responsibility, not because I had any distrust of the local authorities, but as there was a large fair to be held the next day in York, it could not have been stopped if there had been any delay. This, my lord, is what has taken place with regard to the Cattle Plague; and I believe every precaution has been taken that was possible. I have had the advantage of the services of one of the most eminent veterinary surgeons in England, Professor Brown, and the able assistance of Messrs. Cole, Tennant, and Griffiths. I ought, in summing up what is the state of matters at the present moment, to point out to your lordships that from Belgium, Germany, and Russia the importation of live cattle and meat is prohibited, and that sheep and goats from thence are slaughtered at the port of debarkation. The only countries, therefore, from the extreme north to the extreme south of Europe, from which cattle can be admitted at this moment (and then they are detained twelve hours before they are allowed to go) are Norway, Sweden, Denmark, Spain, and Portugal. It is a remarkable fact, and one of which I have only lately been aware, that in those countries no Cattle Plague is or has ever been known to exist; so that no cattle can come into this country from any country in which the Cattle Plague is known to exist.* I hope your lordships think that every possible precaution has been taken, and promptly taken, in dealing with this most disastrous Plague, and that the department over which I have the honour to preside does not go to sleep, but is always ready to take the most prompt and the most effective measures in these emergencies."

The Earl of KIMBERLEY said that when he was Lord Lieutenant of Ireland it was a well-ascertained fact that the Cattle Plague was not introduced into that country by cattle. The supposition was that the drovers who crossed with cattle to England brought back the infection in their clothes.

In the House of Commons on the same occasion Lord SANDON, replying to Sir W. BARTTELOT, said that since the discovery of Cattle Plague in Limehouse in January the disease had been detected in Poplar, Blackwall, Millwall, Stepney, Bow, and Hackney. Beyond the limits of the Metropolis it had been discovered in two sheds at Stratford and Canning Town, in the county of Essex. In each case the diseased animals had been slaughtered, and the premises disinfected. On the 17th inst. information had been received that the Plague had broken out in a dairy at Hull, and on the following day an inspector was sent down from the Veterinary Department of the Privy Council to Hull, to advise the local authorities not to allow any of the cattle exposed for sale in the market to be sent into the country. The

* See note on opposite page.

inspector was also told to see that further examination should be made of all cows in the town. These precautions were at once adopted, and all the cattle in the dairy in question were slaughtered and buried. On two subsequent days the disease was detected in two other parts of the town. With regard to the Metropolis, a *cordon* had been established, and no animals were allowed to leave it alive, and fairs and markets were prohibited except by license. The same measures had been taken with respect to the southern parts of Essex, the East Riding, and also the City of York. Again, the importation of all cattle had been prohibited from Germany and Belgium, and it had been forbidden for some time past from Russia. All cattle coming from the Netherlands and France must be slaughtered at the port of debarkation. Healthy cattle might come into the Metropolis, after examination and detention, from Spain, Portugal, and Denmark, as these countries had never been known to have any Cattle Plague.* The Lord President of

* These extraordinary statements by the Duke of Richmond and Lord Sandon—showing, as they do, a remarkable ignorance of the history of Cattle Plague, for which, of course, neither can be blamed, were commented upon in the following letter, which appeared in *The Times* immediately after the allusions in the Houses of Parliament :—

"In all our dealings with the terrible exotic bovine malady known as 'Rinderpest' and 'Cattle Plague,' we must be largely guided by the teachings of history, as on them our safety from its destructive invasions will to a great extent depend. And we are particularly fortunate in this respect ; for of all the serious contagious disorders to which animals are liable, there is not one the history of which is so clear and complete as the Cattle Plague. The present invasion of the scourge in this country may prove a very serious one, or it may not ; much will depend on chance, as we have no sanitary organization capable of contending with the disease, or with other disorders of this class, which have harassed the country for the last forty years ; and though we know perfectly well on what conditions their introduction, maintenance, and diffusion depend, yet we are still at their mercy. Simply because we have nothing by which to combat them.

"Acknowledging the great value of historical teaching, it is with astonishment that I read the report of the proceedings in the House of Lords last night. In reply to Earl Fortescue's well-timed and pertinent questions relative to this disease, the Duke of Richmond stated :—

"'The only countries from the extreme north to the extreme south of Europe from which cattle are admitted alive at this moment are Norway, Sweden, Denmark, Spain, and Portugal. . . . . It is a remarkable fact, and one of which I have only lately been aware, that in those countries no Cattle Plague is or has ever been known to exist ; and therefore at the present moment no animals are allowed to be imported alive from any country where Cattle Plague has ever existed.'

"And Lord Sandon, replying in the House of Commons to Sir W. Barttelot, observed that—

"'Healthy cattle might come into the Metropolis, after examination and detention, from Spain, Portugal, and Denmark, as these countries had never been known to have any Cattle Plague.'

"It is strange at this time of day to have to point out that both of these statements are inaccurate ; though for their inaccuracy neither of the speakers was to blame, as they doubtless obtained their information from a source supposed to be trustworthy, and they cannot be expected to have the history of the disease at their fingers' ends. The fact is that all the countries named, with the exception perhaps of Portugal, have been visited by Cattle Plague, and two of them, Denmark and Sweden—particularly the former—most severely. In proof of this let me refer to the *Scot's Magazine*, vol. xvii., p. 605, where occurs the following notice :—

"'The 14th of January, 1746, was appointed a day of public fasting and prayer to be observed all over Denmark, on account of the mortality among the cattle throughout that kingdom. It is reckoned to have carried off no less than 60,000 before the middle of

the Council was most anxious to do all he could to abate the Plague, in behalf of the interests alike of producers and consumers. At the same time it was essential that no interference other than was absolutely necessary should take place.

Mr. FORSTER.—"I should like to know whether, in the case of Hull, the cattle were imported direct from Germany or London, and by what ship."

Lord SANDON.—"I cannot give the right hon. gentleman any precise information on that point, but I believe the disease came direct from Germany."

February 24th.

Sir W. BARTTELOT asked the Vice-President of the Council whether inquiries had been instituted with reference to the origin of the outbreak of Cattle Plague at Hull; and, if so, with what result. He wished also to know whether there had been any fresh outbreak of Plague since the noble lord had last addressed the House on the subject.

Mr. NORWOOD asked whether the noble lord was now able to state the

December. It advanced likewise in Jutland, and the apprehensions of it engaged most people to kill their cattle.'

"From 1745 to 1749 it is estimated that it killed 280,000 animals in Denmark. The scourge at the same period entered Sweden, and, according to Linnæus (*Schonensche Reise*), in Schonen alone 32,584 oxen and cows died, leaving alive only 2 per cent. of the entire horned stock of the Province. In the little Island of Oesel, in 1750-51, no fewer than 20,000 cattle succumbed. So calamitous was the pestilence in Denmark, that it engaged the attention of the most learned physicians, and in the Memoirs of the Royal Scientific Society of Copenhagen for 1746 ('Acta Havniensia,' vol. ii.), will be found some curious yet most interesting details concerning it. Not only were the cattle in Denmark and Sweden decimated by the malady, but those of Norway were also swept off by it, while the reindeer in Lapland suffered severely, the infection having been conveyed from Norway to Jutland.

"According to Gissler ('Abhandl. der Schwed. Akada,' vol. xxi., p. 286), it spread among the herds of the Lapps over the whole south-western portion of the country, and caused such havoc that many of the people who previously were very wealthy in possessing immense numbers of reindeer were reduced to extreme poverty.

"So much for the north of Europe. Now for Spain. In 1774 the infection of Cattle Plague was carried by raw hides to Bayonne, where an outbreak occurred, and by some means or other it was conveyed across the Spanish frontier to St. Sebastian, thence spreading rapidly over a wide surface, and causing sad losses: in many towns and villages there perished every head of cattle—as at Andoin, in the province of Alva. The scourge ravaged Navarre, Guipuzcoa, Arragon, the mountains of Santander and those of Pas; and so great was the mortality in the kingdom of Granada that but few cattle remained. The history of this outbreak will be found in Villalba's 'Epidem. Española' (vol. ii., p. 229).

"So much for the accuracy of the statements made in both Houses of Parliament, and which appear to have been applauded. It may be urged in explanation of the inaccuracies, that the authorities which allude to these outbreaks are not very accessible, and that they may well have been overlooked. Such a plea, however, cannot be entertained, as the information was at the hand of the Veterinary Department of the Privy Council; for, in 1871, I published a chronological work on 'Animal Plagues,' from B.C. 1490 to A.D. 1800, in which the history of this and other spreading diseases of animals was traced during that very extensive period, and in which the details of the above outbreaks are given. It is very discouraging to find that eleven years of close and very expensive research, undertaken and carried out solely with the view of benefiting the country, should have been entirely thrown away—that is, if the evidence of last evening be accepted as proof.

"I have mentioned that the history of Cattle Plague is nothing more or less than a series of warnings. One of these warnings is especially urgent at the present moment, and should be impressed upon the memory of those who are so energetically agitating for an Eastern war.

"detailed" information to which he referred when he expressed on Thursday last his belief that the outbreak of Rinderpest at Hull was caused by infection which came direct from Germany.

Lord SANDON.—"I fear I cannot give any positive information as to the origin of the outbreak of Cattle Plague at Hull; but the inquiry which has been made confirms, I think, though indirectly, the statement I made last week, that we had reason to believe that it was imported from Germany. But we have only presumptive evidence on the subject. On January 14th, a cargo of twenty-five cattle was landed at Hull from Hamburg within a part of the port defined for slaughter; and on the following day, the 15th, the cargo of animals largely affected by the Cattle Plague, the arrival of which in London created so much alarm, reached Deptford also from Hamburg. Shortly after the landing of the animals at Hull, the inspector ascertained that several of them were affected with Foot-and-mouth Disease; and the following day one of them was found to be very ill, and was immediately slaughtered. From the account which the inspector has given of the symptoms and of the *post-mortem* appearance, there is no doubt that this animal was the subject of

"When Russia, in 1827, declared war against Turkey, Cattle Plague became rapidly diffused through Bessarabia, and extended thence with the greatest virulence and mortality into Wallachia and Moldavia, and soon entered Podolia and Volhynia. From these countries, Poland, Hungary, Prussia, Saxony, and, finally, the Austrian States were infected, and notwithstanding the most energetic measures the losses were immense. Even in 1830 the malady was not suppressed, but smouldered along the banks of the Danube as far as Illyria. For the havoc it wrought during the operations of the Russo-Turkish war, the works of Von Moltke and Chesney afford evidence; and it is shown that, among other things, the rotting carcases of the cattle which perished from the disease and were left unburied, gave rise to human Typhus in its most malignant form.

"I think there can scarcely be a doubt that Germany and England owe the present outbreak to the Russian mobilization at Kischeneff, and if in 1828-30 the danger and destruction were so formidable in Western Europe, assuredly the risk and the prospect of havoc are immensely increased now, when the facilities for the conveyance of the infecting element are so wonderfully multiplied that almost simultaneously we have outbreaks occurring on the Polish frontier towards Bessarabia, at Hamburg, Altona, Berlin, and in England—at London and Hull. Russian aggression, therefore, threatens more than the destruction of mankind at the immediate seat of war; it imperils the animal wealth of nations which may not enter into the conflict. This should be duly considered by those who are stimulating the war fever.

"One word more as to the danger we always incur with regard to this pestilence. Years ago we were solemnly assured that the risk of its transmission from Germany was *nil*, because of the strict, even severe, sanitary laws always in force in that country. This assurance has now been proved to be fallacious, and every one who knows anything of the subject will be ready to confess that port inspection, however carefully it may be conducted, is not a safeguard against the introduction of Cattle Plague or any other animal plague. The inspector is not born who can detect this malady in its latent stage; and there is no reason whatever why an ox infected at Berlin may not be carried to Aberdeen before the symptoms of Cattle Plague are sufficiently developed to attract the attention of the most astute and experienced inspector. The present outbreak goes far to prove this.

"The lessons afforded by history and the teachings of Veterinary Science are obvious enough. If we remain in ignorance of them or ignore them, only one result can follow. This unhappy result can be nearly if not altogether obviated by the adoption of the precautions suggested by Earl Fortescue, who deserves the warmest thanks of the country at large, but particularly of agriculturists, for bringing the question forward at this crisis

"I have the honour to be, etc.,

"GEORGE FLEMING,

"Veterinary Surgeon, Royal Engineers."

"Chatham, *Feb.* 24.

Cattle Plague. All these animals were slaughtered in the defined part of the port. It was not till the 17th of February that any case of Cattle Plague was detected in a living animal in the dairies of Hull; but it has been ascertained that one dairyman had got rid of all his stock previously to that period, and he asserts that he sent them to the butcher. The other cases which I mentioned as having occurred in Hull were detected after this on an inspection of all the dairies. No fresh cases have been reported since the last information which I gave to the House,—that is to say, since the 20th of February."

Deaths from Hydrophobia.

February 26th.

Mr. Whitwell moved for an address for returns of the number of dogs assessed to the dog-tax in the year 1867, and the number of licenses taken out for dogs in each year since, in each county in England and Wales and in Scotland; and of the number of deaths from Hydrophobia in each county in England and Wales and in Scotland for each of the years from 1867 to 1875 inclusive, and the number of deaths from Hydrophobia in each county in Scotland for each year from 1867 to 1874 inclusive, and in the principal towns in Scotland during the year 1875.

Agreed to.

March 5th.

Mr. Wm. Lowther asked the Vice-President of the Council whether, as the Cattle Disease was known to exist at Hull, measures could not be taken by the Privy Council to induce the local authorities of the West Riding of Yorkshire to suspend in the county all fairs and markets, as had been already done in the East and North Riding.

Viscount Sandon pointed out that, as Hull was the only place hitherto affected by the Cattle Plague, the Privy Council had not thought it desirable to interfere with the discretion of the West Riding in the matter. He might mention, for the information of the House, that no fresh instance of Cattle Plague had occurred since the 27th February.

HOUSE OF LORDS.

The Cattle Plague.

March 8th.

Earl Fortescue called the attention of the President of the Council to the fact that farmers and others had a difficulty in obtaining copies of the Orders in Council issued in regard to the Cattle Plague. This was to be regretted, especially as the farmers were liable to be fined for not complying with the order.

The Duke of Richmond and Gordon quite agreed that, as penalties were attached to the failure to carry out the orders, it was desirable that they should receive as much publicity as possible. Copies of them were sent to all local authorities, inspectors, railway companies, shipowners, and others whom they particularly concerned; and, besides this, copies were kept at the Veterinary Department of the Privy Council, so that any one who applied might receive one. They were given to all applicants free of charge.

Earl Fortescue, having remarked that it was well this should be known to farmers, asked whether the noble Duke had any later information than that supplied by the Vice-President as to the spread or suppression of the disease. He apologised for not having given notice of his question.

The Duke of Richmond and Gordon said he was not aware what answer

had been given in another place by the Vice-President. He had no particular information to give, except that one other case had occurred at Hull within the last forty-eight hours, and that steps were being taken to prevent the disease from spreading.

HOUSE OF COMMONS.

THE CATTLE PLAGUE.

March 12th.

Col. KINGSCOTE asked the Vice-President of the Council whether it was true that a fresh outbreak of Rinderpest had occurred in the neighbourhood of Hull.

Lord SANDON regretted to state that such was the fact. In the afternoon of Friday, the 9th instant, a report was received at the Privy Council Office from a local inspector stating that a case of Cattle Plague had been discovered in Lincolnshire, about nine miles from Great Grimsby. The Chief Inspector of the Privy Council was sent down on Saturday, and his report left no doubt whatever of the disease being Cattle Plague. There were twenty-four animals on the farm, several of which had been affected. They had all been slaughtered, and the Inspector remained on the spot to investigate the origin of the outbreak.

March 13th.

Col. KINGSCOTE asked if the Vice-President of the Council had any further information as to the outbreak of Rinderpest in Great Grimsby, or in any other locality.

Lord SANDON.—"I am very sorry to say that I have not been able yet to ascertain the origin of the outbreak near Grimsby. We hope at any moment to have an account from the inspectors. I am still more sorry to be able to say that last night, after I answered the question of my hon. and gallant friend, Mr. Alexander, of Stepney, reported that the Cattle Plague had broken out in his dairy, consisting of 140 cows. An inspector was sent down, who reported that he found five animals that were undoubtedly affected with Cattle Plague. They were at once destroyed, and the remaining 135 are being slaughtered. This is the more deplorable because Mr. Alexander took every possible precaution, kept his premises locked up, and made his men use disinfectants in their contact with the animals."

Mr. W. E. FORSTER.—Is Stepney within the district round which a cordon has been drawn?"

Lord SANDON.—"It is."

Army Veterinary Department.

Veterinary-Surg. J. K. Grainger (doing duty with the Royal Artillery in India) has been granted leave to England to appear before a medical board.

Inspecting Veterinary-Surg. R. H. U. Holloway has been granted leave for sixty-six days; during which period his duties will be performed by Veterinary-Surg. F. G. Shaw.

It gives us much pleasure to be able to announce that Mr. F. F. Collins has been confirmed in the appointment of Principal Veterinary Surgeon in

India. Mr. Collins had been Acting Principal for some time, and his confirmation in this high and important office will, we are confident, be greatly to the benefit of the Department in our Indian Empire, and, consequently, to the Indian Army.

Many changes and improvements are anticipated in that Department. There is every prospect of the Bombay and Madras inspectorships being filled by two veterinary surgeons from England on the Imperial list, and at an early date. The inspectorship in Bombay is now vacant, and that in Madras is expected to be so before long. We have reason to believe that the relationship between the head of the Veterinary Department in England and the members of the Department in India, has at last been arranged on a satisfactory basis; the Government of India having decided that it is to be similar to that existing in the Medical Department—viz., that direct communication shall be made on professional and departmental matters. It is also not unlikely that a rule will be established by which no veterinary surgeon will be promoted to Staff rank, unless he has completed a tour of foreign service; and there is a prospect of a strict roster being kept for India. This appears to be only fair; for as half the number of army veterinary surgeons are retained and paid by India, that country has a right to a just proportion of experienced men. Of the forty-two First Class Veterinary Surgeons on the list, only ten are in that country. So strictly will the rule be maintained, that should a veterinary surgeon decline to leave his regiment and proceed to India, he will forfeit all claim to promotion to Staff. To counterbalance what will be considered by some as a severe regulation, an effort is likely to be made to limit a tour of India service to five years.

With these increasing exactions on army veterinary surgeons, the question naturally arises as to what compensation in the way of pay and promotion is to be offered. On this all-important point we cannot as yet make any explicit statement. A new and improved scheme has been for some time before the authorities, and it is surmised that the actuaries will have submitted their report upon it in a few days, if they have not already done so. A marked feature in any new scheme is likely to be an examination of the army veterinary surgeon at ten years' service, and if he fails to pass it satisfactorily he will be retired with a bonus.

Whatever is mooted or carried out we may rest assured will be in the direction of efficiency and improvement, if the recommendations of the Principal Veterinary Surgeon are listened to. No one knows better what is necessary, and no one can have the interest of the Department and the service more at heart.

Obituary.

WE are extremely sorry to learn that death has removed from our ranks one of our most esteemed and ablest members, in the person of Mr. James Macgillivray, M.R.C.V.S., late of Inch and Huntly, Aberdeenshire, and who died at Glasgow on February 17th, aged seventy-seven years. Mr. Macgillivray studied in Edinburgh at the Clyde Street School, under the late Professor Dick, and graduating in 1845, he soon began to manifest that enthusiasm for his profession, and that ability in its practice, which have on so many occasions distinguished the *alumni* of the "Dick" school. Perhaps no name was better known in Scotland—and particularly the north—than that of our deceased friend; and we need scarcely wonder at this, when we find that he was a most popular public lecturer, and during his career had delivered

nearly five hundred lectures on all kinds of subjects of current interest. He was also the author of six prize essays on professional topics, and in 1857 published a most excellent "Veterinary Manual," which passed through more than one edition, and to which we have had frequent occasion to refer. Though full of years and honours, the death of such a good and devoted member of our profession nevertheless causes deep regret at the loss we sustain. Mr. Macgillivray's name and ability are not, however, lost to the profession for ever, but are transmitted to his son, whose worthiness to sustain both are evidenced by his valuable and frequent contributions to our pages.

In our last issue we announced the demise of William Fordie, Professor of Anatomy in the Glasgow Veterinary College. To a valued correspondent we owe the following notice of this excellent member of the profession :—

"On Friday se'nnight, the Professor was engaged lecturing to his class, when he was seized with illness, which developed into Typhoid Fever, of so virulent a type that his medical attendant considered it advisable that he should be sent to the Belvedere Hospital. After his removal there he gradually sank, and died on Saturday. The deceased was a native of Edinburgh, and in early life he lectured with marked success in the New Veterinary College of the metropolis, at that time presided over by Professor Gamgee. The duties of lecturer on anatomy in the Glasgow College were discharged for a short time by Professor M'Call, but immediately on the establishment of the anatomical chair, some ten or eleven years ago, it was offered to and accepted by Mr Fordie. The disposition of the Professor did not lead him to take any part in the veterinary practice of the College, his sphere of action being more particularly the class room and the dissecting room. As a lecturer, he was specially fluent in speech ; and, endowed with a most retentive memory, he had all the details of the science at his fingers' ends, so that he was able, unaided by manuscript, to communicate the results of his study and researches to his students. That his manner of teaching was appreciated by his pupils is apparent from the fact that, beginning with a mere handful of students, he had at the time of his death gathered round him an attentive audience numbering between fifty and sixty. Professor Fordie was unmarried."

The following deaths are reported: Mr. W. J. Brewer, M.R.C.V.S., Barnstaple, who graduated on Feb. 4th, 1836 ; Mr. J. Huish, M.R.C.V.S., of the same town, who became a member of the profession on Dec. 6th, 1837.

The death has also been notified to us of W. Shipley, sen., M.R.C.V.S., late of North Walsham, on March 9th, in his seventy-ninth year. Mr. Shipley graduated May 15th, 1823, and had retired from the profession.

Notes and News.

RABIES IN FINLAND.—The *Helsingfors Dagblad* reports that Rabies is prevalent among both dogs and cats in the province of Dara, and that orders have been issued by the Governor for the destruction of all stray dogs.

GASES IN THE STOMACHS OF RUMINANTS.—Mons. Reiset has recently been investigating the nature of the gases found in the stomachs of cows and other ruminants that had become "blasted" from over-feeding on green clover and similar foods. Gas present in the rumen of a cow that died scarcely two hours after access to a clover field, was found to consist of

74·30 per cent. carbonic acid, 23·46 per cent. carburetted hydrogen, and 2·21 per cent. nitrogen. Neither oxygen nor sulphuretted hydrogen could be traced. In the case of a "blasted" sheep, also, 76 per cent. of carbonic acid was found. From these observations Mons. Reiset is led to suggest the employment of alkaline bodies for remedies, amongst which he specially recommends ordinary burnt magnesia.

CATTLE IN RUSSIA.—The number of horned cattle in Russia is returned by the Central Statistical Committee of St. Petersburg at 28,600,000, or about 37 head for every hundred inhabitants. In the southern governments of the Empire, where cattle breeding is far more extensively carried on, the proportion is much greater, reaching the high figure of 111·8 per hundred of the population in the country of the Don-Cossacks. The great majority of the beasts raised are destined for exportation—a branch of commerce which has largely increased of late years. The value of cattle exported between 1851 and 1852 is given as 1,264,000 roubles, which rose to more than 5,000,000 in 1867-8, to 8,000,000 in 1869, and finally to more than 12,000,000 in the year that has just closed. The average price ranges from 25 to 45 roubles, or, in round numbers, from £4 to £8 10*s.* per head. Forty-five per cent. of the exported beasts find their way to Germany, 43 per cent. to Austria, and about 11 per cent. to Turkey and the Danubian Principalities. Other countries with which any trade in cattle is carried on do not receive more than 1 per cent., all taken together.

DISEASES GERMINATED IN HOSPITALS.—Several observers have remarked on the presence of globules of pus and microscopic algæ in the air and on the walls of hospitals. Some interesting facts of this order have recently been communicated to the French Société de Biologie, by M. Neopen, of the laboratory of La Pitié. A square metre of this wall of a surgery-ward having been washed, after two years without washing, the liquid pressed from the sponge (about thirty grammes) was examined immediately after. It was somewhat dark throughout, and contained micrococci in very great quantity (fifty to sixty in the field of the microscope), some micro-bacteria, a small number of epithelial cells, a few globules of pus, some red globules, and, lastly, a few irregular dark masses and ovoid bodies of unknown nature. The experiment was made with all necessary precautions; the sponge employed was new, and carefully washed in water that was newly distilled. Facts like those referred to make it easy to comprehend how the germs of a large number of diseases occur in the air of hospitals, and how the latter may readily become centres of infection. The same conditions, though in less degree, may sometimes be met with in private life.—*Nature.*

MR. CHAINE'S "THE SPEAKER."—A writer in the *Irish Sportsman* says, Happening to be returning from England last week by Stranraer, I observed something very blood-like walking from the train to the boat for Larne. On inquiry, I found this was Mr. Chaine's celebrated horse, "The Speaker," returning home from Liverpool. It may be recollected that the horse, in running for the Sefton Steeplechase, last Liverpool November meeting, received a severe fracture in his hind-leg. The owner, being most anxious to restore the animal, not only on account of his excellent performances, form, and symmetry, but also for his superior and rare breeding, being a great-grandson of old Whalebone, and, by the dam, a direct descendant through Pope Joan by Waxy, out of the Duke of Grafton's famous Prunella by Highflyer—a strain so invaluable, that nothing was left undone to promote recovery for stud purposes. Accordingly, after the accident, instead of being shot, as many advised, Mr. Chaine placed "The Speaker" in the hands of that well-known veterinary surgeon, Mr. Heyes, of Liverpool, and under his judicious treatment, combining skill with great care, a good union of commi-

nuted fracture in the near hind pastern has been effected, with free use of the joints adjoining the seat of injury—a case, I believe, without parallel in the annals of veterinary surgery.—*Conservator.*

EFFECTS OF SWEDISH CLOVER.—In an article communicated to the *Wiener Landwirthschaftliche Zeitung*, Mons. Moritz Rohrmann warns us against the use of Swedish or "bastard" clover (*Trifolium hybridum*) as food for horses. An attempt on his part to use it for this purpose in the form of hay proved utterly unsuccessful five or six years ago, the horses showing a marked repugnance to it, though the hay was thoroughly well made, of good colour, and agreeable smell. In 1872, the last year's hay crop being then exhausted, and the new one not yet got in, he again tried it for his horses—this time in the fresh green state. They ate it unwillingly and but sparingly, and rapidly fell off in condition. Soon an inflammation of the mucous membranes of the mouth appeared, which, together with the tongue, became covered with little pustules. These, on bursting, left small superficial sores covered with a yellow exudation, which gradually increased in depth all over the tongue and gums. This condition of the mouth necessitated a change of food, and the horses rapidly recovered. No connexion between these symptoms and the particular food in question was suspected at the time, the illness being regarded as a casual epizoötic, which had coincidently made its appearance while the special clover was in use. Later on, however, the perusal of some observations made by Dr. Pott on a form of illness caused by *Trifolium elegans* led Mons. Rohrmann to further reflection on the subject, and this year he instituted some experimental researches, with the result of demonstrating most conclusively the deleterious action of the Swedish clover. By alternately giving and withholding the fodder in question, Mons. Rohrmann found himself able to produce or to dispel at will symptoms exactly similar to those observed in 1872, and which were then attributed to some passing epizoötic. The importance of these conclusive observations can hardly be over-rated. Owing to its luxuriant growth and its excellence as food for horned cattle, the cultivation of *Trifolium hybridum* is greatly favouredi n various districts, and it is quite possible that numerous instances are to be found there of horses suffering under some apparently inexplicable malady. This is all the more likely as, according to Mons. Rohrmann, no mention of such a possible explanation is to be found in any extant work on veterinary medicine.—*The Farmer.*

Correspondence, etc.

THE CATTLE PLAGUE IN GERMANY.

To the Editor of the VETERINARY JOURNAL.

MY DEAR MR. EDITOR,—I have just read your very judicious and seasonable letter in *The Times* of March 5th on the "Cattle Plague," and being here at Berlin—the head-quarters of this outbreak,—it may not be uninteresting to you to hear from me as to what I have seen.

The whole State, we will say, is divided into thirty-six departments,—and these again are subdivided into districts; over each of these districts is an official veterinary officer, known as the "Kreis-Thierarzt" or District Veterinary Surgeon,—and the same arrangement is carried out over the entire Empire of Germany. All these men are selected for their ability, and especially for their knowledge of contagious disease; in the smaller towns the "Kreis-Thierarzt" is one of the men of the town, and has for socitey

those who are considered the leading men of the place. The "Departments-Thierarzt" is a much greater character; he is an unusually well-educated person, who must be thoroughly posted in the laws of the Empire relative to his profession, and is responsible to the local state authorities, as well as to the Ministry, for the faithful performance of his duties: the "Kreis-Thierärzte" are responsible to those of the Departments. These officers all receive salaries varying from £50 to £400 per year, and also have fees for official attendance in addition to their regular fee. They are further favoured in their practice by their official position; it being a guarantee to the public for their competency. Prussia does much to encourage graduated students to continue their studies.—This winter some thirty men, from 25 to 40 years of age, are receiving about £40 each from the Government to pay their expenses in Berlin, while they are attending the lectures and studying; and at the time I write they are being examined for higher positions. Every year a new set arrive: so you will understand that our science is properly encouraged on the Continent, and a man has some incentive to work. In Prussia, to every 4·75 square miles (geographical) there is a veterinary surgeon, and to his care are confided 1544 horses, 4592 cattle, 14,221 sheep, 2192 hogs; and there are (or were—for these figures apply to 1875) 1296 practitioners. This has no reference to the number of official veterinarians, but is merely mentioned as a fact which may have some interest for you.

These few remarks will serve as an introduction to the remainder of my letter. Early in January (the date I have not here) there was an unusual excitement noticed around our school: messengers were seen rapidly passing between the offices of the Minister of Agriculture and the school directors. It soon transpired that "der Teufel's los," as it was expressed to me—or in other words the "Rinderpest"—was in Hamburg. It took but a short time to arrange matters. Professor Müller, whom you know as an anatomist, and a great authority on this scourge, was despatched to Hamburg with a high Government officer. Another great expert was sent to the Russian frontier; every Department Veterinary officer was notified by telegraph, and in less than twelve hours an embargo was upon every head of horned cattle in Germany. If I mistake not, your Government was officially informed of the sailing of the *Castor* in sufficient time to have stopped her before reaching London. In such a case there should have been but one course, and if the vessel had been coming from you here it would most certainly have been adopted. She should have been stopped some distance from the port, her hatches battened down, and vessel and cargo towed somewhere, sunk, and paid for by the Government. If this was in reality the first infected cargo, then England would perhaps have been preserved from a serious loss; the future can alone prove what the loss may be.

To return to the outbreak in Germany. The Berlin and all other markets were most vigilantly watched, and no cattle or other animals were allowed to be moved from them alive for slaughter in the city: as I am sorry to say is yet the case, in ordinary times—for Berlin has not yet built any fine slaughter-houses like those of Paris, or of Boston in America; although the way is being prepared. All cattle that had to be moved were first inspected, and then conveyed in waggons and put directly upon the cars; and so it was all over the country. Alluding to your remarks in the *Times* on the futility of inspection when the disease is latent, a fine instance came to pass here, and which our mutual friend Professor Dieckerhoff elucidated with his customary ability. He was called to Westphalia, it being reported that a cow was in a suspicious state. On his arrival the cow in question had been killed or had died, but the illness was said not to be Rinderpest. It was however reported that another cow was sick, and this animal was immediately put under lock and seal,—and the case soon proved to be one of Rinderpest. As

the story is interesting, it may be useful to relate it in full :—This cow had been bought in Berlin by a butcher, who was a Jew ; it was there inspected and passed, was put on the cars with others, and taken to this town, the name of which I forget. The other cattle were at once killed ; but the butcher having a child suddenly die, the remaining cow was sent to a friend for a day or two, for him to keep, and during this interval the disease had time to develop. Professor Dieckerhoff traced the whole affair from beginning to end ; the cow was killed and Rinderpest proved to be present. If this cow had been killed with the others, the disease might have been spread without the real cause ever becoming apparent or being brought to light. I have purposely refrained from saying anything about the action of the authorities in these special cases ; in the investigation of some of them it was my good fortune to be present. Early one morning, about two weeks since, Professor Dieckerhoff sent for me ; it was just daylight, and with him and four other students we started for a village about thirteen miles from Berlin, where a cow was reported sick. I should state that the Government keep a very nice "turn-out" and four horses for this purpose, and Professor Dieckerhoff has this outside clinic—taking four students each time with him—your humble servant going when anything interesting is likely to turn up. We arrived in about two hours, the roads being heavy ; we met the local officers, and proceeded to the suspected farmhouse, but did not enter until we had proved our right to do so : the house being guarded, and not a person allowed to leave or enter the premises, but to speak or pass things in or out through a window. I omitted to state that Professors Dieckerhoff and Hertwig had been there the previous day, and it had been decided to allow another day to pass, in order that the symptoms should be sufficiently developed to prove the existence of the disease, although they had no doubts of the case,—the place being well guarded. During the night a trench had been dug forty feet long and about fourteen deep in an entirely isolated wood, which we could reach without crossing a public way. We removed the cow, made an examination, proved our case ; her nine companions were brought after her to the same place, with their chains and stable utensils ; the cows were then shot, after the decision by the proper officers had been given, and they, with the utensils, were at once buried—a military guard put over the place, another about the farm from which we had taken them, and also in the streets leading to the village : the inmates of this particular place being confined strictly to their own limits for the time prescribed by the law. No cattle or farm animals were allowed in the streets, and only persons permitted there with teams who had received sanction. All those who had to do with the infected cattle were most effectually disinfected ; while those who buried them had no cattle themselves, and were not allowed to go near any within the lawful time. I heard an officer say that the pastor of the village must be carefully watched ; that these gentry were unfortunately apt to be spreaders of contagium,—the guards often allowing them to pass as favoured persons,—and then they, innocently of course, must go to the stable, see things, and afterwards go to another neighbour, to mention the loss of Neighbour so-and-so. This has been often the case in Germany, I am told. The manure, the stall, and all things about the infected stable, are officially disinfected. I was surprised to see numerous military about in the fields and streets, apparently with no purpose, and yet carrying their rifles ; their duty, it seems, was to shoot every dog, cat, or valiant chanticleer which they might see straying abroad or leaving its proper quarter. Everything was regulated in this strict manner throughout. Doubtless the Prussian course may seem severe : all the cattle are killed,—not only the diseased, but all belonging to the infected farm or stable : but the law is, to my mind, essentially democratic,—it is for the good of the whole, and the cattle and utensils are paid for from the State

Treasury at market prices. Although the report has not yet been published, somewhere between one and two thousand head of cattle have been killed, and they have cost the State something like one million thalers—about £125,000.

The diseased cattle were smuggled across the Russian frontier by a man who had been successfully carrying on the business for some time; his punishment is nothing in proportion to the damage he has caused,—being but two years' confinement, if I am not mistaken. It seems now as if this outbreak was completely stamped out; the guard of official veterinarians has been much increased on the frontier, and it is to be hoped that we may be able to keep this dread ravager at bay. Trusting you may find this statement interesting,

Royal Veterinary School, Berlin,
March 12th, 1877.

I remain, very truly yours,
"B."

ANSWERS TO CORRESPONDENTS.

J. FRASER, NEWBURY.—Many thanks for the ovine monstrosity. It is, as you mention, an example of Gurlt's *Perocephalus agnathus*, and certainly a most interesting one. We shall endeavour to describe its anatomical characters in the next issue of the *Journal*.

THE letter of Mr. Watson, Liverpool, is too personal, and contains unjustiable insinuations, for which there is not the slightest foundation.

W. S.—We have made inquiry, and are informed that the late W. Field was insured against accident in the Railway Passengers' Assurance Company, for £1000, which was paid at his death.

SENEX asks why, among the inducements held out to students to enter the Royal Veterinary College, the Fellowship and Licentiate Degrees have recently and suddenly disappeared from the advertisements? Perhaps some of our readers will supply the information.

COMMUNICATIONS from Messrs. Gray, W. C. Gregory, W. A. Cox, Professor Walley, W. E. Keith, "Veterinary Student," H. Olver, H. Bath, R. Poyser, and others, are unavoidably held over to next month.

Communications, Letters, Books, etc., Received.

COMMUNICATIONS have been received from L. T. Barker, Skelton-in-Cleveland; J. W. Hill, Wolverhampton; "Veterinary Student;" Professor Walley, Edinburgh; W. E. Litt, Shrewsbury; G. J. S. Camden, M.R.C.S., Rhyl; Professor McCall, Glasgow; "Five Points;" "Nemo;" J. Fraser, Newbury; C. Stephenson, Newcastle-on-Tyne; A. E. Macgillivray, Banff; C. W. Gregory, Bristol; S. Knott, Royal Artillery; G. Gray, Bakewell; J. Gerrard, Market Deeping; J. McKenny, Dublin; W. Dacre, Altrincham; H. Olver, Tamworth; L. D. Moutray, Dublin; H. Bath, R.A.; "B."

BOOKS: *W. Fricker*, Chirurgisches Vademecum für Thierärzte; *H. Weiss*, Grundriss der Arzneimittellehre für Thierärzte.

JOURNALS: *Live Stock Journal; Oesterreichische Vierteljahresschrift für Wissenschaftliche Veterinärkunde; Archiv für Wissenschaftliche und Practische Thierheilkunde; Wochenschrift für Thierheilkunde und Viehzucht; Annales de Méd. Vétérinaire de Bruxelles; Animal World; Edinburgh Medical Journal; Practitioner.*

NEWSPAPERS: *Liverpool Mercury; Farmer; Agricultural Gazette; Melbourne Medical Record; Melbourne Argus; Australasian; Western Mail; Shrewsbury Chronicle; Ross-shire Journal; Weekly Durham Chronicle.*

All Communications, Books for Review, Advertisements, etc., must be addressed to the Publisher, 20, King William Street, Strand, W.C.

Morbid Specimens are to be forwarded addressed to the Editor, "Veterinary Journal," Brown Institution, Wandsworth Road, London.

Communications must be accompanied by the name of the writer, whether he may desire to have it published or not. Anonymous letters and articles ccannt be inserted. The Editor does not hold himself identified with the views or opinions expressed by Contributors. Communications for insertion in the next number must arrive on or before the 15th of the present month.